EXHIBIT 2-A

(Final Environmental Assessment available at: https://new.mta.info/document/110751)

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CBD and whose New York adjusted gross income for the taxable year is less than $60,000 would be entitled to a New York State tax credit equal to the aggregate amount of Manhattan CBD tolls paid during the taxable year.

5A.4.2.3 COMMUNITY FACILITIES AND SERVICES

This section assesses whether the CBD Tolling Alternative would affect access to and operations of community facilities and services, including potential effects on the workforce for community facilities and services.

The analysis considers the effects of the following:

- Costs to community facilities and service providers that rely on vehicles traveling into and out of the Manhattan CBD
- Costs to people who visit community facilities in the Manhattan CBD
- Costs to the workers who drive to work at community facilities and services in the Manhattan CBD
- Changes in traffic patterns, including potential increases in traffic at some locations, which could affect emergency response times (a community service)

Each of these potential effects on community facilities and services is discussed in the following sections. In addition, Chapter 17, "Environmental Justice," considers these effects on minority and low-income populations.

Costs to Community Facilities and Services

A variety of community facilities and services, such as food pantries and meal delivery services, religious facilities, cultural institutions, social service providers, and home healthcare providers, rely on vehicles to transport people, goods, services, supplies, or staff into and out of the Manhattan CBD. As noted in Chapter 17, "Environmental Justice," and Chapter 18, "Agency Coordination and Public Participation," during early public outreach for the Project in fall 2021, some members of the public raised concerns about the increased cost of travel for nonprofit social service providers that operate in the Manhattan CBD. If these community facilities and services are not exempt from paying the toll, or otherwise reimbursed, they would have to absorb the cost of the toll as part of their operating costs to the extent such funds are available or look for new sources of funding to offset these costs. This would be true for providers located within the Manhattan CBD that provide services to people outside of the Manhattan CBD and providers that are located outside the Manhattan CBD but provide services to Manhattan CBD residents. Increased transportation costs could adversely affect the operations of the service providers if the costs cannot be absorbed or offset through the addition of new funding sources. The costs incurred by various community facilities and services because of the toll would depend on the type of vehicle, how frequently their vehicles need to enter and exit the Manhattan CBD, whether the service provider can consolidate activities or shift to off-peak or overnight hours, whether there is a cap on the number of times a toll can be charged, and other factors. (In all tolling scenarios, automobiles and small vans would pay the toll no more than once per day; some tolling scenarios would have a limit on the number of times per day a truck would pay the

toll and others would not.) Tolling Scenarios B and F would result in lesser effects on services that provide or rely on truck deliveries since they limit the number of times a truck would be charged the CBD toll on a given day. At the same time, community facilities and services that rely on vehicle travel into and out of the Manhattan CBD would benefit from a less congested roadway network.

One example of a community service that may incur additional cost related to the toll is school bus service to and from school across the Manhattan CBD boundary at 60th Street. As described earlier, most students in Manhattan travel to and from school by walking, biking, or public transit. For the school bus operations that occur, the CBD Tolling Alternative would increase the cost of some bus services for NYCDOE if all school buses are not exempt from the toll. (Those school buses carrying students with disabilities would be exempt from the toll under the legislation that created the CBD Tolling Program.) The City of New York would need to set aside funding for this cost, competing with other resource needs.[30] Whether school buses receive an exemption or not, they would still benefit from reduced roadway congestion and additional funds to improve transit service used by their faculty, staff, and students.

Costs to People who Visit Community Facilities and Services

Throughout the regional study area, most community facilities are locally focused, serving their individual communities, although some have a larger regional draw. Most community facilities and services in the Manhattan CBD are close to transit services, making this a viable mode choice for access to those community facilities and, as noted earlier, most travel to and from the Manhattan CBD is by transit. The clientele who use transit would not have increased costs. There would be a cost with the CBD Tolling Alternative to people who drive to community facilities and services in the Manhattan CBD from outside the Manhattan CBD and also to residents of the Manhattan CBD who drive to community facilities outside the Manhattan CBD.

Examples of the type of community facility user who would be affected by the cost of the toll if they drive would be individuals traveling to medical or healthcare facilities, or potentially to a place of worship. These examples are discussed below. As noted in **Chapter 17, "Environmental Justice,"** and **Chapter 18, "Agency Coordination and Public Participation,"** members of the public raised the increased cost of travel for patients traveling to health care facilities in the Manhattan CBD as a concern during early public outreach conducted in fall 2021.

[30] Private schools using buses that pay the CBD toll would have to absorb the costs or pass them on to their students if buses are tolled; in Tolling Scenarios B and F, school buses would be exempt from the toll and in the other tolling scenarios they would be subject to the toll with no cap or exemption.

As described earlier, the rate of vehicle use to access medical facilities depends in part on the facilities' distance to the subway or bus routes (as well as other factors, including the patient's mobility and the type of medical service sought). For medical office uses within one-quarter mile of a subway station, approximately 6 percent of trips to these uses are by auto or taxi/FHV modes, according to data from NYCDOT's mode choice surveys. For medical office uses that are beyond one-quarter mile from a subway station, approximately 14 percent of trips are by auto or taxi/FHV modes. Therefore, most medical trips, even those to facilities more than one-quarter mile from a subway station, are made by modes other than auto or taxi/FHV. With the CBD Tolling Alternative, people traveling to medical facilities in the Manhattan CBD would either continue to travel by vehicle and incur the toll, switch modes to transit to avoid the toll, or seek new medical and healthcare facilities outside of the Manhattan CBD. It may not be reasonable for some individuals to switch modes or seek new medical and healthcare providers. In that case, the CBD Tolling Alternative could increase the cost for certain individuals to access medical facilities and healthcare providers in the Manhattan CBD, depending on their route choice and the tolling scenario. It should be noted that qualifying vehicles—which would include MTA's paratransit service and taxis and FHVs that provide paratransit service on behalf of MTA—transporting people with disabilities would be exempt from the toll. Therefore, disabled people traveling by a qualifying vehicle to or within the Manhattan CBD would not be charged a toll. However, some disabled people may need to use nonqualifying vehicles to access healthcare and medical facilities. In those cases, the CBD Tolling Alternative would result in an additional cost for disabled individuals to access medical facilities and healthcare providers in the Manhattan CBD. Some of this cost may be covered by Medicaid or other insurance, which covers nonemergency medical transportation in certain situations.

The costs incurred by people driving to access medical or healthcare facilities would vary depending on individual circumstances. The greatest cost would be incurred by those who have frequent, regular medical appointments that they drive to (and for whom transit is not an acceptable alternative), and who are not eligible for paratransit or nonemergency medical transportation under Medicaid or other insurance coverage. Driving to and from the Manhattan CBD is already expensive given the very limited availability of free or low-cost parking and the cost of parking or taxi/FHV fares, and it is likely that people who drive regularly to medical appointments would have higher incomes. Individuals who drive infrequently to medical appointments would incur lower costs because of the toll. The increased cost would be partially offset by the travel-time savings provided by a potentially less congested roadway network.

With respect to people traveling to places of worship, as noted earlier, there are some 200 places of worship for many different religions in and around the Manhattan CBD, and some of these places are regionally important. Places of worship are typically accessible by transit, and most do not have on-site visitor parking given the densely developed nature of the Manhattan CBD, which indicates that travel by vehicle is not the predominant mode of transportation for their worshippers. With the CBD Tolling Alternative, individuals would incur an additional cost to travel by vehicle to a place of worship in the Manhattan CBD, or from within the Manhattan CBD to a place of worship outside the Manhattan CBD. The costs incurred by individuals driving to places of worship would vary depending on individual circumstances, as discussed earlier with respect to medical and healthcare facilities. Individuals who use the bus system would benefit from the reduced congestion with the CBD Tolling Alternative.

Overall, given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on the operations of community facilities and services.

Costs to Workers at Community Facilities and Services

Workers at community facilities and services, such as teachers, police officers, or health care workers, may choose to commute by automobile to or from the Manhattan CBD because their work schedule is not conducive for transit use, because they have limited transit options to their place of work, or, in some cases, because they have free parking at their place of work. With the CBD Tolling Alternative, there would be a cost to workers associated with commuting by vehicle if they enter or remain in the Manhattan CBD.

As discussed in more detail in Chapter 6, "Economic Conditions," as a result of the CBD Tolling Alternative, such workers would make one of the following decisions: (1) continue to commute by vehicle and incur the toll cost; (2) switch modes to a nonvehicular option before entering the Manhattan CBD to avoid the toll cost; (3) seek new employment opportunities (or other workplace locations with the same employer) at locations that would not involve incurring the toll; (4) relocate their place of residence to the Manhattan CBD; or (5) telecommute, or telecommute more often, to eliminate or reduce the frequency of incurring the toll. Workers that make decision (1), (2), (4), or (5) or seek other workplace locations with their same employer in decision (3) would continue employment at their respective community facility or service employer, and thus would not affect the provision of community facilities or services. These workers would not result in additional costs to their employers because they would either absorb or avoid the toll. It should be noted that decisions (4) and (5) may not be feasible for many workers at community facilities and services. For decision (4), the potential cost savings associated with eliminating a toll would be far outweighed by other cost-of-living and quality-of-life factors given the relatively high rents and home prices within the Manhattan CBD. For decision (5), telecommuting is not a viable option for many types of work, including many types of community facilities and services work.

Many workers at community facilities and services in the Manhattan CBD would have the option to switch from a vehicle to transit to their place of work because the Manhattan CBD is accessible by transit with a range of modes and service providers, including local and express subways, commuter and intercity rail, local and express buses, intercity buses, and ferries. As noted in Chapter 6, "Economic Conditions," the ease of transit access within the Manhattan CBD allows the subset of Manhattan CBD car commuters who would be discouraged by toll costs and who do not have transit access near their homes, to instead drive to a transit station and complete their commute by transit. As noted earlier, all areas of the Manhattan CBD are within one-half mile of transit service, but one area in the West 50s is not within one-half mile of faster transit modes. As shown in Table 6-11 in Chapter 6, "Economic Conditions," approximately 0.7 percent of all jobs (or 1,415 jobs) in the Manhattan CBD in the "Education, health, and social services" industry category and approximately 0.1 percent of all jobs (or 65 jobs) in the "Public administration," industry category are located more than one-half mile from faster transit at a subway station or express/SBS bus stop. Furthermore, more than 85 percent of jobs in the Manhattan CBD are held by workers who commute by public transportation; approximately 9 percent of Manhattan CBD jobs are held by workers who drive to work alone.

To the extent that some community facilities and services workers who currently drive to work in the Manhattan CBD would seek new employment (i.e., decision (3) above), this would likely happen over time (for example, as people try new modes of transportation to avoid the toll and perhaps ultimately decide to take a new job elsewhere) such that services would be maintained and, if necessary, employers could elect to provide incentives (such as higher pay or reimbursements) to compensate for the cost of the toll to workers. The cost of higher pay for workers in the Manhattan CBD would increase operating costs for the community facility or service provider.

Emergency Response Times

The CBD Tolling Alternative would result in potential changes in traffic patterns, including potential increases in traffic at some locations, which could affect emergency response times. Shifts in traffic patterns would change conditions at some local intersections within and near the Manhattan CBD. Of the more than 102 local intersections analyzed, most intersections would see reductions in or no change in delay. At intersections where the CBD Tolling Alternative would result in increases in delay, the Project will include implementation of signal-timing adjustments to address that delay. Therefore, the increases in delays at local intersections would not adversely affect emergency response times.

Under Tolling Scenarios D, E, and F, the CBD Tolling Alternative would result in increased traffic volumes approaching the Manhattan CBD on the Long Island Expressway (I-495) leading to the Queens-Midtown Tunnel and the Trans-Manhattan Expressway (I-95) between the Alexander Hamilton Bridge and the George Washington Bridge during the midday and PM peak hours. Although there would be some increase in overall travel time at these locations under these tolling scenarios, emergency response vehicles are not bound by standard traffic controls when responding to emergencies and thus may be able to bypass some highway congestion. Therefore, the increased volumes on certain highway segments would not adversely affect emergency response times. The CBD Tolling Alternative would contribute to improved response times in the Manhattan CBD because it would reduce vehicular congestion in the Manhattan CBD.

5A.4.2.4 EFFECTS ON VULNERABLE SOCIAL GROUPS

This section evaluates the Project's potential effects on certain vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and nondriver populations. The potential effects of the CBD Tolling Alternative on minority and/or low-income populations is evaluated in **Chapter 17, "Environmental Justice."**

This section draws on the summary of the potential benefits of the CBD Tolling Alternative provided earlier and includes subsections for each of the relevant social groups.

Elderly Individuals

The CBD Tolling Alternative would result in an additional cost to elderly individuals if they travel by auto and enter or remain in the Manhattan CBD. Some elderly people would shift to other modes to avoid the toll, while others would continue to drive and pay the toll, because it is worth the time savings, because they prefer traveling by car, or because they have limited transportation options. The majority (approximately 63 percent) of the approximately 105,000 people age 65 or older who commute to

Manhattan for work take public transit, while approximately 18 percent drive or travel by taxi or FHV.[31] No information is available about travel mode choices for elderly individuals traveling to the Manhattan CBD for non-work-related reasons. As noted in **Chapter 17, "Environmental Justice,"** and **Chapter 18, "Agency Coordination and Public Participation,"** members of the public raised the increased cost of travel for elderly individuals in the Manhattan CBD as a concern during early public outreach conducted in fall 2021.

The costs incurred by elderly individuals driving to the Manhattan CBD would vary depending on how frequently they choose to drive to the Manhattan CBD and at what time of day. As noted earlier, driving to and from the Manhattan CBD is already expensive given the very limited availability of free or low-cost parking and the cost of taxi/FHV fares, and it is likely that people who drive frequently have higher incomes.[32] With the CBD Tolling Alternative, some elderly individuals would likely switch from vehicles to public transit for journeys to the Manhattan CBD, consistent with BPM data that indicate an overall reduction in driving mode share to the Manhattan CBD ranging from 4 percent (with Tolling Scenario B) to 10 percent (with Tolling Scenario E), or approximately 19,900 to 49,500 fewer daily driving journeys to the Manhattan CBD. **Table 4A-8** in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling,"** provides more information on the predicted change in mode share to the Manhattan CBD.

There are various reasons that elderly people drive to the Manhattan CBD, including trips to work, trips to shop, dine, or attend a performance, trips to visit friends or family, and trips to community facilities, including medical appointments. There is a transit alternative to reach many destinations within the Manhattan CBD, including local buses that stop within a block or two of most destinations. People over the age of 65 with a qualifying disability receive a reduced fare on MTA subways and buses, and elderly individuals with a qualifying disability can also receive MTA's paratransit service, including taxis and FHVs operating on behalf of MTA to transport paratransit users.[33] Elderly people who drive to or from the Manhattan CBD and are low-income would be entitled to the same mitigations and enhancements proposed for younger low-income populations with the CBD Tolling Alternative (see **Chapter 17, "Environmental Justice"**). Other elderly individuals who drive to the Manhattan CBD would pay the full toll.

Elderly individuals would benefit from the travel-time and reliability improvements to bus service with the CBD Tolling Alternative, as bus passengers tend to be older than riders on other forms of transit, such as the subway and, as described above, bus passengers in the Manhattan CBD would benefit from travel-time savings due to the decrease in congestion.[34]

Persons with Disabilities

With the CBD Tolling Alternative, qualifying vehicles transporting people with disabilities would be exempt from the toll. As currently ***[defined]***, qualifying vehicles transporting persons with disabilities includes vehicles with government-issued disability license plates and fleet vehicles owned or operated by

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31 Data on mode of travel to work by age to the Manhattan CBD is not available. Data is available only to the county level.

32 FHWA. Status of the Nation's Highways, Bridges, and Transit Conditions & Performance, 23rd Edition. Chapter 3, "Travel." Last accessed March 21, 2022. https://www.fhwa.dot.gov/policy/23cpr/chap3.cfm#access-to-vehicles.

33 MTA has specific criteria to define qualifying individuals: https://new.mta.info/fares/reduced-fare and https://new.mta.info/accessibility/paratransit/how-to-apply-or-recertify-for-access-a-ride.

34 blog.tstc.org/2014/04/11/nyc-bus-riders-tend-to-be-older-and-poorer-than-subway-riders/.

organizations used exclusively to provide transportation to people with disabilities. Therefore, disabled people traveling by a qualifying vehicle to or within the Manhattan CBD would not be charged a toll. Access-A-Ride paratransit service, which provides public transportation for customers with disabilities or certain qualifying health conditions, would be also exempt from the toll. Some disabled people may rely on travel by nonqualifying vehicles to or within the Manhattan CBD. In that case, the CBD Tolling Alternative would increase the cost for disabled people using nonqualifying vehicles to travel to the Manhattan CBD. As noted earlier, some of the cost to use nonqualifying vehicles for nonemergency medical transportation may be covered by Medicaid in certain situations. As noted in **Chapter 17, "Environmental Justice,"** and **Chapter 18, "Agency Coordination and Public Participation,"** members of the public raised the increased cost of travel for persons with disabilities in the Manhattan CBD as a concern during early public outreach conducted in fall 2021.

The CBD Tolling Alternative would provide benefits to improve paratransit services, such as reduced roadway congestion and travel-time improvements, which would benefit persons with disabilities.

Given the exemption from the toll for qualifying vehicles and the transit and paratransit service improvements, the CBD Tolling Alternative would not adversely affect persons with disabilities.

Transit-Dependent Populations and Nondriver Populations

The CBD Tolling Alternative would benefit transit users in the region, and transit-dependent populations in particular, by creating a new funding source for MTA's 2020–2024 Capital Program and subsequent programs. As described earlier, the CBD Tolling Alternative would result in a mode shift to transit across the region, but this mode shift would not result in adverse effects to the capacity of transit services serving the Manhattan CBD (refer to **Subchapter 4C, "Transportation: Transit"**). Furthermore, the CBD Tolling Alternative would not have unmitigated adverse effects on pedestrian facilities (such as sidewalks and crosswalks) that nondriver populations may rely on, and would result in safety benefits for pedestrians and bicyclists as described earlier. Therefore, potential transit ridership increases due to the CBD Tolling Alternative would not adversely affect transit-dependent populations or nondriver populations.

5A.4.2.5 ACCESS TO EMPLOYMENT

This subsection evaluates the effects of the new CBD toll on access to employment, including for people who travel from elsewhere to jobs in the Manhattan CBD and for residents of the Manhattan CBD who travel to jobs outside the Manhattan CBD.

Changes to Daily Work Journeys to the Manhattan CBD

Table 5A-6 and Table 5A-7 present the number of daily work journeys into the Manhattan CBD from each of the counties in the regional study area for each tolling scenario in comparison to the No Action Alternative. As shown, while the total number of daily work journeys would remain essentially the same (because the number of jobs would be unchanged; the small differences in total journeys are due to rounding in the model results), the distribution of the journeys would change with implementation of the CBD Tolling Alternative.

The CBD Tolling Alternative would result in small shifts in the place of origin for employees with jobs in the Manhattan CBD. More employees would come from New Jersey (a 1.3 to 2.9 percent increase, depending on the tolling scenario), Staten Island (a 2.3 to 3.7 percent increase depending on the tolling scenario), and Long Island (a 1.4 to 2.6 percent increase, depending on the tolling scenario). Fewer employees would come from New York counties north of New York City, with a decrease of 1.7 percent under Tolling Scenario A (a decrease of approximately 1,800 work journeys); Queens, with a decrease of 1.5 percent under Tolling Scenario F (decrease of approximately 3,800 work journeys); the Bronx (a decrease of 1.4 percent under Scenario E); and Brooklyn (a decrease of 1.2 percent under Tolling Scenario E). The largest percentage decrease in daily work journeys to the Manhattan CBD would occur from Connecticut, with a decrease of 2 percent under Tolling Scenario E (a decrease of approximately 1,100 work journeys). These decreases indicate a decrease in jobs held at locations inside the Manhattan CBD by residents of the Bronx, Brooklyn, and Queens; New York counties north of New York City; and Connecticut.

Change in Daily Work Journeys to Non-CBD Locations

Table 5A-8 and Table 5A-9 show the projected change in daily work journeys to locations outside the Manhattan CBD for each county in the regional study area for each tolling scenario. Similar to the work journeys to the Manhattan CBD discussed above, the total number of daily work journeys to non-CBD locations would remain essentially the same (because the number of jobs would be unchanged; the small differences in total journeys are due to rounding in the model results), the distribution of the journeys would change with implementation of the CBD Tolling Alternative.

As shown, the modeling predicts that the number of Manhattan CBD residents who work outside the Manhattan CBD would decrease by up to 2.2 percent under the tolling scenario with the largest decrease (Tolling Scenario E, with a decrease of approximately 800 daily journeys). Specifically, with the No Action Alternative and all tolling scenarios of the CBD Tolling Alternative, approximately 37,000 daily work journeys would originate in the Manhattan CBD bound for locations outside the Manhattan CBD, compared to approximately 165,000 daily work journeys that would originate in the Manhattan CBD and remain there (see Table 5A-6). The reduction under Tolling Scenario E could be due to residents of the Manhattan CBD taking jobs within the Manhattan CBD vacated by non-Manhattan CBD residents who were working in the Manhattan CBD, but who took jobs outside of the Manhattan CBD to avoid the toll.

Table 5A-6. Daily Work Journeys into Manhattan CBD by County of Origin (2023, All Modes)

ORIGIN GEOGRAPHIC AREA	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
New York City	1,008,469	1,004,181	1,003,479	1,002,771	1,001,411	1,000,751	1,001,246	1,002,600
Bronx	97,518	96,911	96,821	96,598	96,359	96,172	96,741	96,409
Kings (Brooklyn)	282,439	280,663	280,595	279,906	279,684	279,165	280,197	280,463
New York (Manhattan)	340,690	339,782	340,032	339,874	340,036	340,401	339,459	339,300
Inside Manhattan CBD[1]	164,814	165,096	164,894	165,304	165,480	165,649	165,289	165,093
Outside Manhattan CBD	175,876	174,686	175,138	174,570	174,556	174,752	174,170	174,207
Queens	260,444	258,756	257,996	257,996	257,335	256,897	256,624	258,367
Richmond (Staten Island)	27,378	28,069	28,035	28,397	27,997	28,116	28,225	28,061
Long Island Counties[2]	128,802	131,412	131,993	131,253	131,272	131,777	130,636	132,202
New York Counties North of New York City[3]	101,745	99,988	100,411	100,742	100,272	100,014	100,247	100,347
New Jersey Counties[4]	264,412	268,175	267,738	269,024	271,000	272,034	271,413	269,303
Connecticut Counties[5]	57,639	57,274	57,394	57,303	57,085	56,505	57,517	56,565
TOTAL	1,561,067	1,561,030	1,561,015	1,561,093	1,561,040	1,561,081	1,561,059	1,561,017

Source: BPM, WSP 2021.

1 Journeys originating in the Manhattan CBD are internal journeys within the Manhattan CBD.

2 Long Island counties include Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

5 Connecticut counties include Fairfield and New Haven.

Table 5A-7. Change in Daily Work Journeys into Manhattan CBD Compared to No Action Alternative (2023, All Modes)

ORIGIN GEOGRAPHIC AREA	SCENARIO A		SCENARIO B		SCENARIO C		SCENARIO D		SCENARIO E		SCENARIO F		SCENARIO G	
	No.		No.		No.		No.		No.		No.		No.	
New York City	-4,288	-0.4	-4,990	-0.5	-5,698	-0.6	-7,058	-0.7	-7,718	-0.8	-7,223	-0.7	-5,869	-0.6
Bronx	-607	-0.6%	-697	-0.7%	-920	-0.9%	-1,159	-1.2%	-1,346	-1.4%	-777	-0.8%	-1,109	-1.1%
Kings (Brooklyn)	-1,776	-0.6%	-1,844	-0.7%	-2,533	-0.9%	-2,755	-1.0%	-3,274	-1.2%	-2,242	-0.8%	-1,976	-0.7%
New York (Manhattan)	-908	-0.3%	-658	-0.2%	-816	-0.2%	-654	-0.2%	-289	-0.1%	-1,231	-0.4%	-1,390	-0.4%
Manhattan CBD[1]	282	0.2%	80	0.0%	490	0.3%	666	0.4%	835	0.5%	475	0.3%	279	0.2%
Outside Manhattan CBD	-1,190	-0.7%	-738	-0.4%	-1,306	-0.7%	-1,320	-0.8%	-1,124	-0.6%	-1,706	-1.0%	-1,669	-0.9%
Queens	-1,688	-0.6%	-2,448	-0.9%	-2,448	-0.9%	-3,109	-1.2%	-3,547	-1.4%	-3,820	-1.5%	-2,077	-0.8%
Richmond (Staten Island)	691	2.5%	657	2.4%	1,019	3.7%	619	2.3%	738	2.7%	847	3.1%	683	2.5%
Long Island Counties[2]	2,610	2.0	3,191	2.5	2,451	1.9	2,470	1.9	2,975	2.3	1,834	1.4	3,400	2.6
New York Counties North of New York City[3]	-1,757	-1.7	-1,334	-1.3	-1,003	-1.0	-1,473	-1.4	-1,731	-1.7	-1,498	-1.5	-1,398	-1.4
New Jersey Counties[4]	3,763	1.4	3,326	1.3	4,612	1.7	6,588	2.5	7,622	2.9	7,001	2.6	4,891	1.8
Connecticut Counties[5]	-365	-0.6	-245	-0.4	-336	-0.6	-554	-1.0	-1,134	-2.0	-122	-0.2	-1,074	-1.9
TOTAL	-37	0.0	-52	0.0	26	0.0	-27	0.0	14	0.0	-8	0.0	-50	0.0

Source: BPM, WSP 2021.

1 Journeys originating in the CBD are internal journeys within the Manhattan CBD.

2 Long Island counties include Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

5 Connecticut counties include Fairfield and New Haven.

Table 5A-8. Daily Work Journeys to Non-CBD Locations by County of Origin (2023, All Modes)

ORIGIN GEOGRAPHIC AREA	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
New York City	1,807,303	1,811,591	1,812,293	1,813,001	1,814,361	1,815,021	1,814,526	1,813,172
Bronx	320,338	320,945	321,035	321,258	321,497	321,684	321,115	321,447
Kings (Brooklyn)	587,782	589,558	589,626	590,315	590,537	591,056	590,024	589,758
New York (Manhattan)	154,301	155,209	154,959	155,117	154,955	154,590	155,532	155,691
Inside Manhattan CBD[1]	37,457	37,175	37,377	36,967	36,791	36,622	36,982	37,178
Outside Manhattan CBD	116,844	118,034	117,582	118,150	118,164	117,968	118,550	118,513
Queens	620,209	621,897	622,657	622,657	623,318	623,756	624,029	622,286
Richmond (Staten Island)	124,673	123,982	124,016	123,654	124,054	123,935	123,826	123,990
Long Island Counties[2]	1,008,938	1,006,328	1,005,747	1,006,487	1,006,468	1,005,963	1,007,104	1,005,538
New York Counties North of New York City[3]	658,523	660,280	659,857	659,526	659,996	660,254	660,021	659,921
New Jersey Counties[4]	2,416,474	2,412,711	2,413,148	2,411,862	2,409,886	2,408,852	2,409,473	2,411,583
Connecticut Counties[5]	644,072	644,437	644,317	644,408	644,626	645,206	644,194	645,146
TOTAL	6,535,310	6,535,347	6,535,362	6,535,284	6,535,337	6,535,296	6,535,318	6,535,360

Source: BPM, WSP 2021.

1 Journeys originating in the Manhattan CBD are internal journeys within the Manhattan CBD.

2 Long Island counties include Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

5 Connecticut counties include Fairfield and New Haven.

Table 5A-9. Change in Daily Work Journeys to Non-CBD Locations Compared to No Action Alternative (2023, All Modes)

ORIGIN GEOGRAPHIC AREA	SCENARIO A		SCENARIO B		SCENARIO C		SCENARIO D		SCENARIO E		SCENARIO F		SCENARIO G	
	No.		No.		No.		No.		No.		No.		No.	
New York City	4,288	0.2	4,990	0.3	5,698	0.3	7,058	0.4	7,718	0.4	7,223	0.4	5,869	0.3
Bronx	607	0.2%	697	0.2%	920	0.3%	1,159	0.4%	1,346	0.4%	777	0.2%	1,109	0.3%
Kings (Brooklyn)	1,776	0.3%	1,844	0.3%	2,533	0.4%	2,755	0.5%	3,274	0.6%	2,242	0.4%	1,976	0.3%
New York (Manhattan)	908	0.6%	658	0.4%	816	0.5%	654	0.4%	289	0.2%	1,231	0.8%	1,390	0.9%
Inside Manhattan CBD[1]	-282	-0.8%	-80	-0.2%	-490	-1.3%	-666	-1.8%	-835	-2.2%	-475	-1.3%	-279	-0.7%
Outside Manhattan CBD	1,190	1.0%	738	0.6%	1,306	1.1%	1,320	1.1%	1,124	1.0%	1,706	1.5%	1,669	1.4%
Queens	1,688	0.3%	2,448	0.4%	2,448	0.4%	3,109	0.5%	3,547	0.6%	3,820	0.6%	2,077	0.3%
Richmond (Staten Island)	-691	-0.6%	-657	-0.5%	-1,019	-0.8%	-619	-0.5%	-738	-0.6%	-847	-0.7%	-683	-0.5%
Long Island Counties[2]	-2,610	-0.3	-3,191	-0.3	-2,451	-0.2	-2,470	-0.2	-2,975	-0.3	-1,834	-0.2	-3,400	-0.3
New York Counties North of New York City[3]	1,757	0.3	1,334	0.2	1,003	0.2	1,473	0.2	1,731	0.3	1,498	0.2	1,398	0.2
New Jersey Counties[4]	-3,763	-0.2	-3,326	-0.1	-4,612	-0.2	-6,588	-0.3	-7,622	-0.3	-7,001	-0.3	-4,891	-0.2
Connecticut Counties[5]	365	0.1	245	0.0	336	0.1	554	0.1	1,134	0.2	122	0.0	1,074	0.2
TOTAL	37	0.0	52	0.0	-26	0.0	27	0.0	-14	0.0	8	0.0	50	0.0

Source: BPM, WSP 2021.

1 Journeys originating in the Manhattan CBD are internal journeys within the Manhattan CBD.

2 Long Island counties include Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

5 Connecticut counties include Fairfield and New Haven.

Work journeys originating in Manhattan north of 60th Street and bound for locations other than the Manhattan CBD would increase by approximately 1 percent compared to the No Action Alternative under all tolling scenarios. Similarly, work journeys from Brooklyn, Queens, and the Bronx to non-CBD locations would increase slightly under all tolling scenarios compared to the No Action Alternative. As noted previously, the BPM assumes regional employment would stay the same under the No Action Alternative and the CBD Tolling Alternative. Thus, the increases in work journeys to non-CBD locations from Manhattan north of 60th Street, Brooklyn, Queens, and the Bronx would directly offset (in terms of number of journeys) the decreases in work journeys to the Manhattan CBD shown in **Table 5A-7**. Likewise, the decreases in daily work journeys to locations outside of the Manhattan CBD originating in New Jersey or Long Island under each tolling scenario would be directly offset by the increases in work journeys to the Manhattan CBD shown in **Table 5A-7**.

Potential Effects on Access to Employment

Approximately 1.4 million daily work journeys would travel into the Manhattan CBD from outside the CBD under any tolling scenario (see **Table 4A.2-10** in **Appendix 4A.2, "Transportation: Travel Forecast Scenario Summaries and Detailed Tables,"** and approximately 17 percent of these work journeys would be by driving (either the drive alone, high-occupancy vehicle, or taxi/FHV modes) compared to approximately 18 percent under the No Action Alternative. Although the share of total work journeys by driving would be similar under the No Action Alternative and CBD Tolling Alternative, the number of work journeys by driving modes to and within the Manhattan CBD would decrease by 4 to 10 percent (or 11,800 to 27,000 fewer driving journeys), depending on the tolling scenario (see **Table 6-23** in **Chapter 6, "Economic Conditions"**). Many of these workers, particularly those coming from other areas of New York City, would have transit access to the Manhattan CBD, but they might choose to drive despite the Manhattan CBD toll (for example, because they value the travel-time savings and convenience of driving, or they have work hours that are less conducive for transit).

As noted previously and shown in **Figure 5A-3**, a small portion of New York City does not have convenient access to faster transit modes (commuter rail, subway, or express bus/SBS bus service), although all of the city other than one neighborhood is within one-half mile of transit including local bus service. Approximately 5,200 people currently commute to the Manhattan CBD by car from these areas; as discussed previously, these car commuters are widely distributed throughout the city. For workers in these areas, some commuters could choose to drive instead to a transit hub if parking is available there (see **Subchapter 4D, "Transportation: Parking"**), and others could opt to use local bus service to access commuter rail, subway, or express bus/SBS service. As noted previously, the CBD Tolling Alternative would also result in beneficial effects from the reduction in VMT and enhanced mobility that would result from reduced congestion, which would potentially offset the negative effect of increasing the cost of driving to the Manhattan CBD.

In addition, with the CBD Tolling Alternative, some car commuters with destinations outside the Manhattan CBD who use routes that pass through the Manhattan CBD to their destinations might choose a different route to avoid the CBD toll. This routing decision would be based on consideration of the cost of the toll versus the cost of the alternative routing, which could be a longer distance or more time-consuming. These

commuters would still reach their destination and some drivers might use a different route than they do today. With the CBD Tolling Alternative, the number of work journeys to the Manhattan CBD originating from New Jersey and Long Island is projected to increase, and those bound for the Manhattan CBD from Brooklyn, Queens, the Bronx, and Manhattan outside the Manhattan CBD are projected to decrease. These decreases in work journeys to the Manhattan CBD are projected to be offset by increases in work journeys to non-CBD locations, which suggests that the CBD Tolling Alternative would result in small shifts in employment patterns (i.e., generally a change of 2 percent or less as shown in **Table 5A-7**). Furthermore, the regional study area has a dynamic economy with many employment opportunities across the region. Of the region's total employment of approximately 10.7 million jobs, 1.5 million are in the Manhattan CBD. This demonstrates that ample employment opportunities exist outside the Manhattan CBD for those who choose not to travel to the Manhattan CBD for work.

With respect to Manhattan CBD reverse commuters, the BPM results indicate that, in the aggregate, approximately 37,000 daily work journeys would originate in the Manhattan CBD bound for locations outside the Manhattan CBD with both the No Action Alternative and the CBD Tolling Alternative in all tolling scenarios, and approximately 31 percent to 33 percent of these work journeys (or 11,600 to 12,200) would be by the drive alone, high-occupancy vehicle, or taxi/FHV modes to places of work outside the Manhattan CBD under any tolling scenario, compared to 33 percent with the No Action Alternative. In the tolling scenario with the greatest change in work journeys made to places of work outside the Manhattan CBD (Tolling Scenario E, with a decrease of 835 journeys), the CBD Tolling Alternative would result in up to a 2.2 percent decrease in the number of work journeys from the Manhattan CBD to locations outside the Manhattan CBD compared to the No Action Alternative, which indicates a small effect on overall employment access for residents of the Manhattan CBD. This indicates the small likelihood that Manhattan CBD residents would change job locations from someplace outside the Manhattan CBD to a location within the Manhattan CBD because of the CBD Tolling Alternative. Most Manhattan CBD residents that currently work outside the Manhattan CBD would continue to do so as a result of the CBD Tolling Alternative.

Overall, the CBD Tolling Alternative would not adversely affect access to employment for residents of the regional study area and would not adversely affect social groups or population characteristics of the regional study area. Commuters who travel (by any mode) to, from, or within the Manhattan CBD to access employment would benefit from the reduced congestion resulting from the CBD Tolling Alternative. Furthermore, by creating a new funding source for the MTA 2020–2024 Capital Program and subsequent capital programs, the CBD Tolling Alternative would benefit commuters who use MTA transit services to access employment.

5A.5 CONCLUSION

Transportation users in the region would benefit from the CBD Tolling Alternative through travel-time savings, improved travel-time reliability, reduced vehicle operating costs, improved safety, reduced air pollutant emissions, and a predictable funding source for transit improvements. This would positively affect community connections and access to employment, education, healthcare, and recreation for residents.

All areas of New York City outside the Manhattan CBD have transit access to the Manhattan CBD and would not be isolated from community services or ties within the Manhattan CBD. Even with the robust transit accessibility between the Manhattan CBD, New York City, and the regional study area, however, some people would continue to drive to the Manhattan CBD with the new CBD toll in place. The costs incurred by individuals driving to the Manhattan CBD would vary widely, depending on individual circumstances and the specific tolling scenario. The greatest cost would be incurred by those who make frequent driving journeys to the Manhattan CBD during peak hours. Driving to and from the Manhattan CBD is already expensive given the very limited availability of free or low-cost parking and the cost of off-street parking or taxi/FHV fares, and it is likely that people who drive regularly have higher incomes. Individuals who drive less frequently would incur lower costs because of the toll. Since the majority of trips to and from the Manhattan CBD are made by transit, most people would not be affected, and community cohesion would not be adversely affected. ***[The Project Sponsors have committed to a package of mitigation measures to address potential adverse effects on low-income drivers who have no reasonable alternatives to reach the Manhattan CBD, which are described in Chapter 17, "Environmental Justice."]***

The CBD Tolling Alternative does not require the acquisition of any private property or occupied structure and therefore would not result in direct residential displacement. Given the myriad of factors that influence real estate costs in the region, the new CBD toll would not have a substantial effect on housing values either in the Manhattan CBD or in other residential neighborhoods near transit. As a result, indirect displacement resulting from the CBD Tolling Alternative would not occur.

Throughout the region, most community facilities and services serve their individual communities and, as a result, the potential effects of the Project on local community facilities would be limited. Nonetheless, a variety of community facilities and services, such as food pantries and meal delivery services, religious facilities, cultural institutions, social service providers, and home healthcare providers, rely on vehicles to transport people, goods, services, supplies, or staff into and out of the Manhattan CBD. Community service providers that are not exempt from the toll and do not have other travel options would have to absorb the cost of the toll. Given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services. Workers at community facilities and services, such as teachers, police officers, or health care workers, who currently choose to commute by automobile to or from the Manhattan CBD would have a new cost that may or may not be reimbursed by their employer, but most of these workers have the option to switch from a personal vehicle to transit to their place of work.

The CBD Tolling Alternative would result in potential changes in traffic patterns, including potential increases in traffic at some location. The analysis concludes that neither the increases in delay at local intersections nor the increased volume on certain highway segments would adversely affect emergency response times.

The CBD Tolling Alternative would result in an additional cost to elderly individuals if they travel by auto to and from the Manhattan CBD. Some elderly people would shift to other modes to avoid the toll. Elderly people with a qualifying disability could receive reduced fares on MTA subways and buses or could qualify

for MTA paratransit services, which are exempt from the toll. Low-income elderly individuals would benefit from the mitigation measures and enhancements identified for low-income drivers in general.

With the CBD Tolling Alternative, qualifying vehicles transporting people with disabilities would be exempt from the toll, as would paratransit service. Some disabled people may rely on travel by nonqualifying vehicles to or within the Manhattan CBD, and in that case, the CBD Tolling Alternative would increase the cost for those disabled people.

The CBD Tolling Alternative would impose tolls on vehicles entering or remaining in the Manhattan CBD, which could affect individuals who currently drive to work. The number of work trips by driving modes to and within the Manhattan CBD would decrease with the Project, with an offsetting increase in transit travel. Those who continue to drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. Some workers may also choose to forego their work trip to the Manhattan CBD and find other employment and other workers would choose to take on those jobs. The regional study area has a dynamic economy with many employment opportunities spread across the region. Overall, the CBD Tolling Alternative would not adversely affect access to employment for residents of the regional study area.

Table 5A-10 provides a summary of the effects of the CBD Tolling Alternative related to population characteristics and community cohesion.

Table 5A-10. Summary of Effects of the CBD Tolling Alternative on Population Characteristics and Community Cohesion

TOPIC	SUMMARY OF EFFECTS	EFFECT FOR ALL TOLLING SCENARIOS	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
Benefits	Benefits in and near the Manhattan CBD	Benefits in and near the Manhattan CBD related to travel-time savings, improved travel-time reliability, reduced vehicle operating costs, improved safety, reduced air pollutant emissions, and predictable funding source for transit improvements. This would positively affect community connections and access to employment, education, healthcare, and recreation for residents.	No	No mitigation needed. Beneficial effects
Community Cohesion	Changes to travel patterns, including increased use of transit, resulting from new toll	Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.	No	No mitigation needed. No adverse effects. See Chapter 17, "Environmental Justice," for mitigation related to increased costs for low-income drivers.
Indirect Displacement	No notable changes in socioeconomic conditions or cost of living so as to induce potential involuntary displacement of residents in the Manhattan CBD	The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household's decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York's rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project).	No	No mitigation needed. No adverse effects
Community Facilities and Services	Increased cost for community facilities and service providers in the Manhattan CBD, their employees who drive, and clientele who drive from outside the CBD	The Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD, as well as residents of the CBD and employees of community facilities who use vehicles to travel to community facilities outside the CBD. Given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.	No	No mitigation needed. No adverse effects

TOPIC	SUMMARY OF EFFECTS	EFFECT FOR ALL TOLLING SCENARIOS	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
Effects on Vulnerable Social Groups	Benefits to vulnerable social groups from new funding for MTA Capital Program	The Project would benefit certain vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations by creating a funding source for the MTA 2020–2024 Capital Program (and subsequent capital programs and by reducing congestion in the Manhattan CBD). Elderly individuals would benefit from the travel-time and reliability improvements to bus service with the CBD Tolling Alternative, as bus passengers tend to be older than riders on other forms of transit, such as the subway and, as described above, bus passengers in the Manhattan CBD would benefit from travel-time savings due to the decrease in congestion. People over the age of 65 with a qualifying disability receive a reduced fare on MTA subways and buses, and elderly individuals with a qualifying disability can also receive MTA's paratransit service, including taxis and FHVs operating on behalf of MTA to transport paratransit users. Elderly people with disabilities and low-income individuals who drive to the Manhattan CBD would be entitled to the same mitigation and enhancements proposed for low-income and disabled populations, in general (see Table 161). Other elderly individuals who drive to the Manhattan CBD would pay the toll.	No	No mitigation needed. No adverse effects
Access to Employment	Increased cost for small number of people who drive to work in the Manhattan CBD	Decrease in work trips by driving modes to and within the Manhattan CBD, with an offsetting increase in transit ridership. Those who would drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. Negligible effect (less than 0.1%) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.	No	No mitigation needed. No adverse effects

5B. Neighborhood Character

5B.1 INTRODUCTION

Neighborhood character is an amalgam of various character-defining features of an area. This subchapter describes the analysis of effects of implementing the CBD Tolling Alternative on neighborhood character, relying on the result of the traffic, transit, pedestrians and bicyclists, economic considerations, parklands, historic and cultural resources, visual resources, air quality, and noise analyses prepared for this EA.

5B.2 METHODOLOGY

5B.2.1 Framework for Neighborhood Character Analysis

Neighborhood character is the mix of the various elements that give neighborhoods their distinct personality, context, and feeling. Neighborhood character consists of the attributes, including social and economic characteristics, and assets that make a neighborhood unique and that establish a sense of place for residents, workers, and visitors. Changes in travel patterns can affect neighborhood character by resulting in a notable change in vehicular and/or pedestrian traffic in an area or a related change in vehicle noise or air quality, if that change in turn affects a defining feature of the area's neighborhood character.

Neighborhood character is distinct from community cohesion, which is the degree to which groups of people with shared attributes or affinities—such as cultural, religious, artistic, or activity-based communities—form and maintain communities that are not limited to any location or neighborhood. Project effects on community cohesion are discussed in **Subchapter 5A, "Social Conditions: Population Characteristics and Community Cohesion."**

5B.2.2 Study Areas

This subchapter considers whether the CBD Tolling Alternative would affect neighborhood character at a local level by introducing changes in travel behavior that could in turn affect defining features of neighborhood character. The analysis considers the potential effects that would occur in neighborhoods where BPM results indicate that Project-related changes in travel behavior would occur: the Manhattan CBD; at and close to 60th Street; near neighborhood streets where vehicular traffic would increase because of the Project; and at transit hubs where vehicular and/or pedestrian activity would increase because of the Project. The study areas for this assessment include the following:

- **Manhattan CBD Study Area** – This study area includes the portion of Manhattan inclusive of and south of 60th Street from the Hudson River to the East River.[1]

[1] For the purposes of the analysis in this subchapter, the Manhattan CBD study area includes the West Side Highway/ Route 9A and the FDR Drive because these roadways are within and form part of the neighborhood context of the Manhattan CBD. However, vehicles that travel exclusively on these roadways would not be subject to the Manhattan CBD toll.

- **60th Street Manhattan CBD Boundary Study Area** – 60th Street is the only segment of the Manhattan CBD boundary that is adjacent to neighborhoods outside the Manhattan CBD (elsewhere, the boundary is defined by the Hudson and East Rivers and New York Harbor). Because a new toll would be implemented between neighborhoods where no toll exists today, an analysis of potential effects on the neighborhood character of this area is merited. This study area includes the section of Manhattan between 55th and 65th Streets from the Hudson River to the East River, overlapping with a portion of the Manhattan CBD study area. This study area at the border of the Manhattan CBD is included for consideration of changes in travel behavior that could occur near the edge of the Manhattan CBD following implementation of the CBD Tolling Alternative and their potential for localized effects on its neighborhood character.

  The study area is limited to five blocks on either side of the Manhattan CBD boundary because while changes in transportation activity near the 60th Street Manhattan CBD boundary could be spread out over a broader area, this analysis makes the conservative assumption that the changes would be more concentrated (and therefore more intense) in the five blocks on either side of 60th Street and could have the potential to adversely affect neighborhood character.

In addition to the two study areas described above, the following areas where changes in transportation activity would result from Project implementation were also considered. For the reasons explained below, there is no potential for Project implementation to adversely affect neighborhood character in these areas, and no further analysis of these study areas was warranted.

- **Neighborhood Streets and Highways Experiencing Increases in Traffic** – The CBD Tolling Alternative would result in an overall net reduction in auto journeys to and from the Manhattan CBD. Depending on the tolling scenario, certain local streets and highway segments are projected to experience increases in vehicle traffic from route diversions. (**Subchapter 4B, "Transportation: Highways and Local Intersections,"** identifies these local streets and highways.) The concern for neighborhood character on these neighborhood streets and highways is whether this increased vehicular traffic could substantively burden the roadways in a way that could affect defining features of neighborhood character.[2] As described in **Section 5B.4.3**, changes in neighborhood character in neighborhoods where local streets and highways would experience increased traffic are not anticipated; therefore, specific study areas were not defined for this analysis.

  Some neighborhoods near these neighborhood streets and highways have large concentrations of minority and/or low-income populations, collectively "environmental justice populations," who live in them. **Chapter 17, "Environmental Justice,"** describes these neighborhoods and evaluates the effects of the CBD Tolling Alternative on the environmental justice populations who live there.
- **Transit Hubs** – With the CBD Tolling Alternative, certain public transportation hubs would experience an increase in transit ridership as more travelers to and from the Manhattan CBD elect to take public transportation rather than personal transportation or taxis/FHVs to avoid the toll. (**Subchapter 4C,**

[2] This analysis relies on the impact determinations in **Subchapter 4B, "Transportation: Highways and Local Intersections,"** to determine whether roadways have been substantively burdened.

"Transportation: Transit," identifies the transit hubs.) The concern for neighborhood character at these transportation hubs is whether this increased travel activity could substantively burden[3] the roadways, parking facilities, and pedestrian elements in the immediate area of the transit hubs in a way that could affect defining features of neighborhood character, or whether the larger numbers of travelers accessing the transit hubs could cause changes in market forces near the transit hubs that could lead to displacement of businesses or residents in a way that would affect defining features of neighborhood character. As described in **Section 5B.4.3**, changes in neighborhood character near transit hubs are not anticipated; therefore, specific study areas were not defined for this analysis.

5B.3 AFFECTED ENVIRONMENT

This section describes the existing neighborhood character of each study area.

5B.3.1 Manhattan CBD Study Area

For the assessment in this subchapter, the Manhattan CBD study area is defined as the area of Manhattan south and inclusive of 60th Street. This area includes a heterogeneous mix of neighborhoods and serves as the economic hub of the New York City region (**Figure 5B-1**). This section broadly describes the character of the Manhattan CBD organized into three geographic areas—Lower Manhattan, Canal Street to 14th Street, and Midtown Manhattan north of 14th Street—following a traditional division of the Manhattan CBD into broad groupings of neighborhoods based on similarities in neighborhood character.

The Manhattan CBD has census block groups that house minority and low-income (collectively, "environmental justice") populations. **Chapter 17, "Environmental Justice,"** evaluates the effects of the CBD Tolling Alternative on environmental justice populations.

LOWER MANHATTAN

Lower Manhattan is the southern portion of the Manhattan CBD study area from the tip of Manhattan north to Canal Street. This area includes neighborhoods such as the Financial District, Battery Park City, Chinatown, Tribeca, and Civic Center, and falls within Manhattan Community District 1 and a portion of Community District 3.[4] The area's built form is characterized by narrow streets in configurations that are not the typical Manhattan grid (e.g., the original colonial-era street configuration in the Financial District) and a varied mix of building forms that include low-rise, mid- to late-19th century buildings; turn-of-the-century and Art Deco skyscrapers; and tall, modern, brick and metal-and-glass skyscrapers, especially in the World Trade Center complex and Battery Park City. Land uses in the area include predominantly commercial and civic/government uses in the southernmost portions of Lower Manhattan, giving way to a more mixed-use, lower-density character with more residential, retail, open space, and light industrial uses

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[3] This analysis relies on the impact determinations in **Subchapter 4C, "Transportation: Transit," Subchapter 4D, "Transportation: Parking,"** and **Subchapter 4E, "Transportation: Pedestrians and Bicycles,"** to determine whether roadways, parking facilities, and pedestrian elements have been substantively burdened.

[4] New York City is divided into 59 community districts, a division of local governance. Each district is represented by a community board, a group of up to 50 unsalaried members selected by the area's elected officials. Community boards serve an advisory role to address land use and community concerns within their districts and as a liaison between the public and the local government.

in the northern portions of Lower Manhattan. The area of Lower Manhattan south of Chambers Street has experienced a notable increase in residential use in recent decades, including conversion of prior office space into residential apartments. The Two Bridges neighborhood contains several public housing projects comprising thousands of affordable apartments.

Figure 5B-1. View of the Manhattan CBD Looking North to Midtown Manhattan from One World Trade Center

Source: Allison L. C. de Cerreño, 2022.

Lower Manhattan includes neighborhoods with notable environmental justice populations—Two Bridges and the portions of the Chinatown and the Lower East Side neighborhoods below Canal Street. **Chapter 17, "Environmental Justice," Section 17.5.2** provides more information on these neighborhoods.

Lower Manhattan contains the approaches and entrance ramps to four major river crossings: the Brooklyn Bridge, Manhattan Bridge, Holland Tunnel, and Hugh L. Carey Tunnel. Traffic is particularly heavy at the river crossing entrances and exits, and traffic is often congested due to the narrow streets and irregular street layout. Generally, pedestrian volumes are extremely heavy on weekdays (because of the area's worker population) and lighter on weekends. Several major transportation hubs are located in Lower Manhattan and provide service connections to and between the subway system, the Port Authority Trans-Hudson (PATH) system, and ferry services. These include the PATH World Trade Center terminal; Fulton

Center subway complex; and ferry terminals at Pier 11, Battery Park City, and Whitehall Street (Staten Island Ferry and Battery Maritime Building).

The defining features of neighborhood character for the Lower Manhattan portion of the Manhattan CBD study area include its wide mix of street configurations and building forms; its dominant patterns of commercial, civic/government, and residential uses; the presence of numerous large-scale transportation facilities linking the area to other parts of the city and region; high levels of vehicular and pedestrian traffic; and the high density of development and intensity of use that characterize its neighborhoods.

CANAL STREET TO 14TH STREET

From Canal Street to 14th Street, the overall character of the Manhattan CBD study area is low-rise (compared to Lower Manhattan and Midtown) and more mixed-use, with a greater concentration of residential uses. Neighborhoods in the area include the Lower East Side, East Village, West Village/Greenwich Village, Soho, Hudson Square, and Meatpacking District. The area falls within Manhattan Community District 2 and a portion of Community District 3. Land uses in this area include mid-rise and high-rise residential buildings, many with ground-floor retail; institutional uses such as museums, university buildings, public and private schools, and churches; and open spaces. Local retail is generally concentrated on the avenues and includes concentrations of restaurants, drinking establishments, coffee shops, grocery stores, and other service establishments such as laundromats. The blocks closest to the East River in the Lower East Side and East Village neighborhoods contain several public housing projects comprising thousands of affordable apartments. Compared to other areas of the Manhattan CBD, office space is less prevalent between Canal and 14th Streets, but there are areas of converted industrial lofts and factory spaces used for commercial purposes. The Williamsburg Bridge lands at Delancey Street in this area of Manhattan.

This part of Manhattan includes the East Village neighborhood and portions of the Chinatown and Lower East Side neighborhoods, which have notable concentrations of environmental justice populations. Chapter 17, "Environmental Justice," Section 17.5.2 provides additional information on these neighborhoods.

The defining features of neighborhood character for the Canal Street to 14th Street portion of the Manhattan CBD study area include its thoroughly mixed-use character, with a high concentration of residential uses, local retail, open spaces, and institutional uses; relatively lower building heights (compared to Lower Manhattan and Midtown); high levels of vehicular and pedestrian traffic; and a level of development and intensity of use that are lower than those of Lower Manhattan or Midtown—though still quite high compared to most parts of the region.

MIDTOWN MANHATTAN

North of 14th Street, the character of the Manhattan CBD study area transitions to the high-density commercial uses of Midtown. Neighborhoods in this area include Union Square, Chelsea, Midtown, Garment Center, Times Square, Hell's Kitchen/Clinton, Stuyvesant Town, Murray Hill, Kips Bay, and Sutton Place. Midtown Manhattan falls within Manhattan Community Districts 4, 5, and 6. Notably, given the predominantly north–south orientation of the subway system and arterial street network in this part of

Manhattan, the eastern and western sides of Midtown are notably distinct from each other in terms of neighborhood character.

Midtown Manhattan contains a dense mix of office and commercial uses, with notable concentrations of office use along Park and Sixth Avenues, near Penn Station New York, in Rockefeller Center, in Times Square, around Grand Central Terminal, and in the new Hudson Yards neighborhood (**Figure 5B-2**). Major transportation hubs—including Penn Station New York, Grand Central Terminal, the Lincoln Tunnel, the Port Authority Bus Terminal, Queens-Midtown Tunnel, the Ed Koch Queensboro Bridge, and the ferry terminals at East 34th Street and West 39th Street—serve Midtown, as do numerous subway lines and the PATH system.

Figure 5B-2. Morning Congestion and Traffic in Midtown Manhattan Looking South on Third Avenue (Summer 2022)

Source: MTA

Midtown Manhattan also includes substantial residential uses, generally located in the eastern and western portions of Midtown. For example, numerous high-rise apartment buildings line Second and First Avenues, while brownstones and tenement buildings are mainly on the side streets. Residential uses are also concentrated west of Sixth Avenue, particularly within the Hell's Kitchen/Clinton neighborhood, and south of West 34th Street. Several public housing complexes are spread throughout Midtown. Local retail tends to be concentrated along the avenues and consists of ground-floor restaurants, bars, and local goods and services.

In Midtown Manhattan, the Hell's Kitchen and Clinton neighborhoods have concentrations of environmental justice populations. **Chapter 17, "Environmental Justice," Section 17.5.2** provides additional information on these neighborhoods.

The defining features of neighborhood character for the Midtown portion of the Manhattan CBD study area include its dominant patterns of commercial and residential uses; the presence of numerous large-scale transportation facilities linking the area to other parts of the city and region; high levels of vehicular and pedestrian traffic; heavily visited tourist attractions such as Times Square and the Empire State Building; and the high density of development and intensity of use that characterize its neighborhoods.

SUMMARY

Taken together, the defining features of neighborhood character for the Manhattan CBD study area include the following:

- Wide mix of street configurations (particularly in Lower Manhattan) and building forms, ranging from row houses to skyscrapers
- Established patterns of land use, with a heavy mix of uses across the Manhattan CBD and concentrations of different types of uses in certain neighborhoods
- The presence of numerous large-scale transportation facilities linking the Manhattan CBD study area to other parts of the city and region
- High levels of vehicular and pedestrian traffic
- Very high density of development and intensity of use (somewhat lesser between Canal and 14th Streets, and greater in Lower Manhattan and Midtown)

5B.3.2 60th Street Manhattan CBD Boundary Study Area

The 60th Street Manhattan CBD boundary study area includes the area between 55th and 65th Streets from the Hudson River to the East River (**Figure 5B-3**), which encompasses the boundary of the Manhattan CBD at 60th Street and the blocks to the immediate south and north of the boundary. This area is densely developed with a wide mix of uses and long-established land use patterns. The area has heavy vehicular and pedestrian traffic, with access to multiple subway and bus routes and high transit usage.

From 55th Street to 60th Street, the 60th Street Manhattan CBD boundary study area is part of the Manhattan CBD, and is a high-density district characterized by a mix of uses, including commercial and residential skyscrapers, retail districts, and large cultural and institutional facilities. The areas east of Second Avenue and west of Eighth Avenue are more residential in character, but still very densely developed with row houses and mid- and high-rise apartment buildings. Between 55th and 60th Streets, the 60th Street Manhattan CBD boundary study area is characterized by high pedestrian traffic throughout the day, and heavy vehicular traffic on all north–south roadways, along 57th Street and Central Park South, on the West Side Highway/Route 9A and the Franklin D. Roosevelt (FDR) Drive, and near the entrances and exits to the Ed Koch Queensboro Bridge.

Figure 5B-3. 60th Street Manhattan CBD Boundary Study Area (Manhattan from 55th Street to 65th Street)

Sources: New York City Department of City Planning, BYTES of the BIG APPLE, https://www1.nyc.gov/site/planning/data-maps/open-data.page.
ArcGIS Online, https://www.arcgis.com/index.html. January 2022.

[Note: For an audio description, please go to the following link: https://www.youtube.com/watch?v=W_apPTDwDX0&list=PLZHkn788ZQJPEY5zv-dr2gzkzMQFMgb_2&index=5.]

From 60th Street to 65th Street, the 60th Street Manhattan CBD boundary study area includes the densely developed east and west sides of Manhattan and the southern portion of Central Park. The east and west sides of Manhattan are high-density districts containing residential, commercial, cultural, and institutional uses. Residential uses include a mix of forms including row houses, mid- and high-rise apartment buildings, and residential skyscrapers. Neighborhood commercial corridors are along most north–south avenues. Streets in this area are characterized by heavy use due to the neighborhood's density and its proximity to the Manhattan CBD. There is heavy vehicular traffic on north–south avenues and on the east–west side streets in the eastern portion of the area, which provide access to the Ed Koch Queensboro Bridge and the FDR Drive. At the northern edge of the area, 65th Street is more heavily trafficked, because it provides eastbound vehicular access across Central Park between the Upper West Side and Upper East Side neighborhoods via the 65th Street transverse. (66th Street, just outside the 60th Street Manhattan CBD boundary study area, provides westbound access across Central Park and is also heavily trafficked). Pedestrian traffic is also heavy throughout the area, although less so on side streets.

While there are on-street, curbside parking spaces on most streets in the 60th Street Manhattan CBD boundary study area, on-street spaces are generally not a reliable source of parking and finding available parking spaces that are not already occupied can involve substantial time searching for an available space. Much of this parking is metered, and New York City on-street parking regulations are complex, with variable time-of-day and day-of-week regulations applying to any given space, which limits the reliable supply of available on-street parking spaces at any given time. For example, on-street parking throughout New York City, including in the 60th Street Manhattan CBD boundary study area, is subject to the city's alternate-side parking regulations, which require vehicles to be moved during the week to facilitate street cleaning. At other locations, parking is metered during certain hours with a limited length of stay, and drivers must renew the charge to park or get ticketed for violating parking regulations. At other locations, parking is restricted during peak commuter hours to provide additional moving lanes but is allowed during other times. Each of these regulations increases the complexity of finding a parking space that is reliably available for the entire duration during which an individual needs to park their car.

New York City policy does not protect or prioritize on-street parking in this section of Manhattan; in fact, the City of New York has implemented several policies and programs that promote repurposing on-street parking spaces for other uses, which has reduced the number of on-street parking spaces over time. These include the NYCDOT's bike-share program, which places bike-share docking stations in former on-street parking spaces, and the Open Restaurants program, which allows restaurants and other food-service establishments to convert on-street parking spaces to customer seating. The small percentage of residents of the 60th Street Manhattan CBD boundary study area who have vehicles (approximately 74 percent of 60th Street Manhattan CBD boundary study area households do not have a vehicle[5]) either park their vehicles in curbside spaces despite these challenges or use private off-street garages, often paying monthly. Public rates for monthly parking spaces (as opposed to preferential rates for residents of the building where the garage is located) range from approximately $400 per month to over $1,000 per month;[6] in general,

[5] U.S. Census Bureau, American Community Survey 5-Year Estimates, 2015–2019. Data are for the 21 census tracts that are closest to the 60th Street Manhattan CBD boundary study area (including Manhattan Census Tracts 106.01, 106.02, 108.01, 108.02, 108.03, 110, 112.01, 112.02, 112.03, 114.01, 114.02, 120, 122, 135.02, 137, 139, 145, 147, 149, 151.01, 151.02). In this area, 73.7 percent of households have no vehicles available; the margin of error is 2.0 percent.

[6] spothero.com.

higher pricing corresponds with greater proximity to major destinations, as well as added features such as valet service. Typically, given the low vehicle ownership rates in this area, the challenges in finding available parking spaces in the 60th Street Manhattan CBD boundary study area and the dense, walkable nature of the area, as in the rest of Manhattan, most residents do not drive a vehicle for errands and shopping as they might outside the city. For example, modal split data prepared for the Greater East Midtown Rezoning (covering an area just south of the 60th Street Manhattan CBD boundary study area that is comparable in terms of land use and transportation patterns) showed that 83 percent of trips to local retail destinations were walk trips, and 12 percent of local retail trips were made via public transportation (subway or bus); only 5 percent of these trips were made via automobile (2 percent by private auto, and 3 percent by taxi/FHV).[7]

The southern portion of Central Park is very different in character from the other areas of the 60th Street Manhattan CBD boundary study area, as it is part of a large (840-acre), landscaped city park. The section of Central Park within the 60th Street Manhattan CBD boundary study area is heavily used and has a variety of active and passive recreation areas. Other than the transverse roadways that cross the park, roadways in Central Park are closed to vehicular traffic other than authorized vehicles, and these roadways are heavily used by bicyclists, runners, and walkers, as well as recreational horse carriages. Throughout the southern part of Central Park, the tall buildings of the surrounding neighborhoods are visible and visually delimit the edges of the park. The park serves as an important public open space for residents, workers, and visitors from the adjacent neighborhoods. **Chapter 7, "Parks and Recreational Resources,"** provides more information about Central Park.

The defining features of neighborhood character for the 60th Street Manhattan CBD boundary study area include the following:

- Heavily mixed-use nature and established patterns of office, retail, residential, cultural, institutional, and open space uses
- High density of development
- High levels of vehicular and pedestrian traffic and transit use
- Highly walkable nature
- Contrast provided by the large open expanse of the southernmost portion of Central Park

5B.4 ENVIRONMENTAL CONSEQUENCES

5B.4.1 No Action Alternative

The No Action Alternative would not implement a vehicular tolling program with its associated tolling infrastructure. New York Metropolitan Transportation Council (NYMTC) socioeconomic and demographic forecasts and BPM modeling conducted for this Project show that between the 2023 build year and the 2045 future analysis year and in the absence of Project implementation, population would experience

[7] New York City Department of City Planning. May 2017. *Greater East Midtown Rezoning Final Environmental Impact Statement*, Chapter 12, "Transportation," Table 12.4 Transportation Planning Factors.

modest background growth, with corresponding increases in roadway traffic and transit ridership (see **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling,"** for further detail). The neighborhood character of the Manhattan CBD study area and the 60th Street Manhattan CBD boundary study area would be similar to existing conditions.

5B.4.2 CBD Tolling Alternative

This section describes the potential effects of the CBD Tolling Alternative (all tolling scenarios) on neighborhood character.[8] CEQR guidance for neighborhood character analyses notes that neighborhood character is an amalgam of various character-defining features, and when a defining feature of neighborhood character would be adversely affected, this would in turn adversely affect neighborhood character overall. Travel patterns help give neighborhoods their distinct personality, context, and feeling, and thus are a component of neighborhood character. This section presents potential beneficial and adverse effects on defining features of neighborhood character resulting from implementation of the CBD Tolling Alternative.

MANHATTAN CBD STUDY AREA

As described in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling,"** the CBD Tolling Alternative would reduce VMT in the Manhattan CBD study area, although VMT reductions would not be evenly spread across the Manhattan CBD, and certain roadways would experience increased VMT due to route diversions. Overall, reduced VMT in the Manhattan CBD would reduce associated pollutant emissions and improve travel times and travel-time reliability. Even in locations where traffic would increase, the Project would not adversely affect air quality (see **Chapter 10, "Air Quality"**) or noise (see **Chapter 12, "Noise"**). Therefore, there would be no potential for changes in air quality or noise to adversely affect defining features of neighborhood character. Beneficial Project effects to air quality and noise at the local scale would be limited and would not affect defining features of neighborhood character.

As described in **Section 5B.3.1**, the defining features of neighborhood character in the Manhattan CBD study area include the following:

- Wide mix of street configurations (particularly in Lower Manhattan) and building forms, ranging from row houses to skyscrapers
- Established patterns of land use, with a heavy mix of uses across the Manhattan CBD and concentrations of different types of uses in certain neighborhoods
- The presence of numerous large-scale transportation facilities linking the Manhattan CBD study area to other parts of the city and region
- High levels of vehicular and pedestrian traffic
- Very high density of development and intensity of use (somewhat lesser between Canal and 14th Streets, and greater in Lower Manhattan and Midtown)

[8] See **Chapter 2, "Project Alternatives,"** for information on the tolling scenarios.

Potential concerns for neighborhood character in the Manhattan CBD study area due to implementation of the CBD Tolling Alternative relate to whether changes in the number of people accessing the Manhattan CBD and economic effects on specific industries would have the potential to affect defining features of neighborhood character.

Changes in the Number of People Accessing the Manhattan CBD

As described in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling,"** BPM results indicate that despite congestion reductions resulting from the Project, due to people shifting to other modes the overall number of daily journeys by all modes to, from, and within the Manhattan CBD study area would not change substantially because of the Project. The BPM has a limited ability to predict trip cancellation, and it is likely that some additional trips to the Manhattan CBD beyond those projected by the BPM would be canceled due to the implementation of the Project. **Subchapter 4A** notes that experience from similar program implementations in London and Stockholm shows that while some trip cancellation would occur, it would be a relatively small percentage of overall drivers accessing the Manhattan CBD (less than 3 percent in London and up to approximately 11 percent in Stockholm). Because only approximately 20 percent of all Manhattan CBD-related journeys are made by auto, cancellation of a small percentage of auto trips would not result in a significant decrease in total journeys by all modes. For example, in 2023 under Tolling Scenario B (the scenario with the highest number of Daily Manhattan CBD-related vehicle person- journeys, per **Table 4A-9** in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling"**), if 11 percent of those journeys were cancelled altogether, this would result in a decline of 50,329 total CBD-related journeys; if 3 percent of those journeys were cancelled altogether, this would result in a decline of 13,726 total CBD-related journeys. In the context of the approximately 2.8 million total daily journeys to the Manhattan CBD in 2023 (see **Table 5A-2** in **Subchapter 5A, "Social Conditions: Population Characteristics and Community Cohesion,"**), this represents a small fraction of total journeys to the Manhattan CBD. With this small reduction in the overall number of people accessing the Manhattan CBD study area daily, the high levels of vehicular and pedestrian traffic, high density of development and intensity of use, and the prominence of large-scale transportation facilities that are defining characteristics of neighborhood character in the Manhattan CBD would not be affected. Therefore, the CBD Tolling Alternative would not adversely affect neighborhood character in the Manhattan CBD study area due to changes in the number of people accessing the Manhattan CBD.

As discussed in the previous paragraph, with the Project, pedestrian traffic in this area would likely increase due to mode shift away from automobiles, which could benefit land uses that rely on high levels of pedestrian traffic, particularly retail uses. This would reinforce the established patterns of land use, heavy mixing of uses, and the very high density of development and intensity of use that are defining features of neighborhood character in the Manhattan CBD study area.

Economic Effects on Specific Industries

As noted in **Chapter 18, "Agency Coordination and Public Outreach,"** members of the public raised Project effects on small businesses as a concern during early public outreach conducted in fall 2021. **Chapter 6, "Economic Conditions,"** concludes that changes in travel patterns brought on by the CBD Tolling Alternative would not adversely affect any particular industry or occupational category in the Manhattan CBD,

including small businesses. The analysis also indicates no adverse changes to commercial traffic providing goods and services to the Manhattan CBD.

Therefore, economic effects on specific industries resulting from the CBD Tolling Alternative would not adversely affect the established land use patterns and mixing of uses that are defining features of neighborhood character in the Manhattan CBD study area.

As discussed above, with the Project, pedestrian traffic in this area would likely increase, which could benefit specific industries that rely on high levels of pedestrian traffic, particularly retail businesses. This would reinforce the established patterns of land use, heavy mixing of uses, and the very high density of development and intensity of use that are defining features of neighborhood character in the Manhattan CBD study area.

60TH STREET MANHATTAN CBD BOUNDARY STUDY AREA

As described in **Section 5B.3.2**, the defining features of neighborhood character in the 60th Street Manhattan CBD boundary study area include the following:

- Heavily mixed-use nature and established patterns of office, retail, residential, cultural, institutional, and open space uses
- High density of development
- High levels of vehicular and pedestrian traffic and transit use
- Highly walkable nature
- Contrast provided by the large open expanse of the southernmost portion of Central Park

Concerns for neighborhood character in the 60th Street Manhattan CBD boundary study area because of implementation of the CBD Tolling Alternative relate to whether changes in driving behavior, changes in access to parking, economic effects of changes in travel patterns, and effects on Central Park would have the potential to affect defining features of neighborhood character.

Changes in Driving Behavior and Access to Parking

As described in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling,"** BPM results for all tolling scenarios indicate that with the CBD Tolling Alternative, roadway traffic would generally decrease across the 60th Street Manhattan CBD boundary study area; however, traffic would increase on certain streets due to route diversions, particularly in the eastern portion of the 60th Street Manhattan CBD boundary study area near the Ed Koch Queensboro Bridge. The volume of vehicular traffic on each of the avenues immediately north of 60th Street would decrease under all tolling scenarios. As noted in **Chapter 18, "Agency Coordination and Public Outreach,"** members of the public raised concerns about high levels of congestion near cultural institutions in the Upper West Side portion of the 60th Street Manhattan CBD boundary study area during early public outreach conducted in the fall of 2021; as this area is located immediately north of 60th Street, BPM results described above indicate that the Project would improve the traffic situation in this area. The drop in vehicular traffic along the avenues north of 60th Street

described above also suggests that the demand for parking in those neighborhoods would not increase. However, members of the public have expressed concern that after implementation of the CBD Tolling Alternative, taxi/FHV drop-offs would increase just north of 60th Street and demand for the existing, limited supply of on-street parking north of 60th Street could increase, as people seek to avoid crossing the Manhattan CBD boundary in a vehicle and paying the toll. However, this is unlikely to occur given the difficulty in finding an available parking space in this area (see discussion in Section **5B.3.2**). On-street parking is generally not a reliable source of parking in the 60th Street Manhattan CBD boundary study area. To have a reliable source of parking, commuters and other drivers who routinely access the Manhattan CBD from the north would likely seek a monthly space in a parking lot or garage; as discussed in Section **5B.3.2**, costs for monthly spaces in this area range from approximately $400 to over $1,000 per month, which would offset the benefit of avoiding the toll. If any increase in parking demand or taxi/FHV drop-offs does occur in this area, it would likely decrease over time as people adjust their travel patterns to account for the toll. Particularly for those driving their personal vehicles, the complexity and wasted time associated with finding parking in this area would likely deter long-term shifts to parking just north of the 60th Street Manhattan CBD boundary. Any increase in demand for on-street parking would not affect most neighborhood residents, who are not likely to rely on on-street parking for their regular parking needs. It should be noted that ready access to on-street parking spaces is not a defining feature of neighborhood character in this area, and any limited changes to on-street parking availability that may occur as a result of Project implementation would therefore not have the potential to affect neighborhood character.

As described in Chapter 6, "Economic Conditions," Section 6.4.3.2, if an increase in demand for off-street parking were to occur just north of the 60th Street Manhattan CBD boundary, that demand would be accommodated through available capacity, or if there were capacity constraints, it would be offset through upward adjustments in parking fees; this would likely offset potential changes in parking behavior resulting from the CBD Tolling Alternative. Between 60th and 65th Streets, there are 7,525 off-street parking spaces in 52 parking facilities, which under typical conditions are at 70 to 80 percent occupancy.[9] Of these, 3,865 spaces in 34 parking facilities are located east of Central Park, and 3,660 spaces in 18 parking facilities are located west of Central Park. For additional detail, see Chapter 6, "Economic Conditions," Table 6-33. It is unlikely that new off-street parking capacity would be added just north of 60th Street because the area is built-out and lacks available sites, and a decades-long trend toward lower parking demand combined with high real estate values in this area further suggest that new parking garages would not be developed.

With the CBD Tolling Alternative, neighborhood residents who live on one side of the Manhattan CBD boundary and park on the other, and who elect not to switch to a parking space on the same side of the Manhattan CBD boundary, would need to pay the toll each time they drive to their residence. This could add complexity to certain activities for those individual residents, such as dropping off purchases at a residence after a shopping trip. However, as noted, most residents do not have vehicles, and among those

[9] Based on a sampling of parking utilization collected in 2018 and 2019 during typical conditions for environmental review studies, weekday midday off-street parking utilization generally ranges from approximately 70 to 80 percent of capacity, with lower utilization rates in the AM and PM peak periods. Applying this utilization estimate to the total off-street parking capacity between 60th and 65th Streets (7,525 spaces) equates to between 1,505 and 2,258 available off-street parking spaces.

who do, most do not drive their vehicles in connection with shopping trips in this way. In addition, the New York City zoning code and CEQR guidance do not prioritize such activities in this section of Manhattan. New York City zoning does not require most developments in the 60th Street Manhattan CBD boundary study area to include off-street parking, and CEQR guidance generally does not consider project parking shortfalls in the 60th Street Manhattan CBD boundary study area to constitute an adverse impact due to the wide availability of transit and other alternative modes of transportation.

Any changes in driving behavior and access to parking would not adversely affect the defining features of neighborhood character in the 60th Street Manhattan CBD boundary study area. Because new parking garages are not likely to be developed in the place of existing uses, there would be no change in the mixed-use nature, established land use patterns, and high development densities that are defining features of the area's neighborhood character. Any increase in demand for parking would not affect the defining features of neighborhood character in the 60th Street Manhattan CBD boundary study area, because ready access to parking is not a defining feature of neighborhood character in this area.

Economic Effects of Changes in Travel Patterns

While the reductions in roadway traffic with the CBD Tolling Alternative would reduce congestion in the neighborhood, the 60th Street Manhattan CBD boundary study area would continue to experience heavy vehicular traffic overall given its major activity centers and its connections to the Ed Koch Queensboro Bridge, a major East River crossing. Pedestrian traffic would likely increase, which could benefit retail businesses in the neighborhood. Because the CBD Tolling Alternative would not substantially change the overall number of people using the neighborhood, it would not result in changes to the land use patterns that contribute to the character of the 60th Street Manhattan CBD boundary study area. Existing businesses in the 60th Street Manhattan CBD boundary study area would not be adversely affected, except potentially for off-street parking garages, which are discussed in the next paragraph (see **Chapter 6, "Economic Conditions,"** for further discussion of existing businesses).

As described in **Chapter 6, "Economic Conditions,"** demand for off-street parking could decrease in the blocks south of 60th Street after implementation of the CBD Tolling Alternative. This could lead to the redevelopment of existing parking garages with new replacement uses over time. The high property values in the neighborhood combined with existing zoning would ensure that replacement uses would be consistent with the types of uses already prevalent in the area, such as high-density commercial, residential, and institutional uses.

Therefore, the economic effects of changes in travel patterns would not adversely affect the mixed-use nature, prevailing land use patterns, high densities, and highly walkable nature that are defining features of neighborhood character in this area.

Pedestrian traffic would likely increase in the 60th Street Manhattan CBD boundary study area, which could benefit retail businesses in the neighborhood, reinforcing the established patterns of land use that are a defining feature of the area's neighborhood character. Any redevelopment of existing parking garages could also benefit neighborhood character by introducing more active uses and higher densities that are more aligned with the defining features of the area's neighborhood character.

Effects on Central Park

Central Park is closed to vehicular traffic except for park deliveries or other drivers with permitted business in the park; therefore, there would be no increase in the small number of vehicles that use the park roadways. The CBD Tolling Alternative would not result in any adverse effects on Central Park, such as changes in the use of the park or any reduction in usable parkland. The CBD Tolling Alternative (all tolling scenarios) would result in reduced traffic volumes adjacent to Central Park on Fifth Avenue and Central Park West as well as reduced traffic volumes crossing the park using the park's sunken transverse roads, which would be considered a beneficial effect on the park (see **Chapter 7, "Parks and Recreational Resources"**). Thus, the CBD Tolling Alternative would not adversely affect the character of Central Park, which is a defining feature of neighborhood character in the 60th Street Manhattan CBD boundary study area, and would result in beneficial effects to the park.

NEIGHBORHOOD STREETS AND HIGHWAYS EXPERIENCING INCREASES IN TRAFFIC

Subchapter 4B, "Transportation: Highways and Local Intersections," provides analysis of highway segments and intersections in neighborhoods where changes in traffic would occur and concludes that with the implementation of standard traffic improvements, there would be no adverse traffic effects at local intersections. **Subchapter 4B** also concludes that through implementation of Transportation Demand Management measures, adverse traffic effects would be mitigated on highway segments where potentially adverse effects would result from increases in traffic volumes. As a result, with implementation of Transportation Demand Measures, there would be no substantial change to the overall operation or character of local streets or highways. Therefore, the CBD Tolling Alternative does not have the potential to alter neighborhood character near neighborhood streets or highways experiencing increases in traffic.

Many of the neighborhoods near these neighborhood streets and highways contain environmental justice populations. As noted in **Chapter 17, "Environmental Justice"** and **Chapter 18, "Agency Coordination and Public Outreach,"** during early public outreach conducted in the fall of 2021, members of the public raised concerns that traffic diversions to highways in Upper Manhattan and the Bronx with the CBD Tolling Alternative would adversely affect nearby neighborhoods with environmental justice populations, including by degrading air quality and increasing noise. Members of the public also voiced concerns about the effects of changes in traffic on the Lower East Side section of Lower Manhattan. **Section 17.6** provides a discussion of effects on environmental justice communities.

TRANSIT HUBS

As noted in **Section 5.B.2.2**, the concern for neighborhood character at transit hubs relates to whether increased travel activity resulting from the Project would substantively burden the roadways, parking facilities, and pedestrian elements in the immediate area of the transit hubs in a way that could affect defining features of neighborhood character, or whether the larger numbers of travelers accessing the transit hubs could cause changes in market forces near the transit hubs that could lead to displacement of businesses or residents in a way that would affect defining features of neighborhood character. **Subchapter 4C, "Transportation: Transit," Subchapter 4D, "Transportation: Parking,"** and **Subchapter 4E, "Transportation: Pedestrians and Bicycles,"** conclude that the CBD Tolling Alternative would increase ridership at many transit stations, but it would not result in adverse effects to the operations of transit

hubs. **Subchapter 5A, "Social Conditions: Population Characteristics and Community Cohesion,"** concludes that the CBD Tolling Alternative would not result in adverse effects from indirect residential displacement near transit hubs. **Chapter 6, "Economic Conditions,"** concludes that the CBD Tolling Alternative does not have the potential to substantively alter market conditions in neighborhoods surrounding transportation hubs. Therefore, given that the Project would not result in any effects at transit hubs, the CBD Tolling Alternative does not have the potential to alter neighborhood character near transit hubs.

5B.5 CONCLUSION

Table 5B-1 summarizes the effects of the Project.

Table 5B-1. Summary of Effects of the CBD Tolling Alternative on Neighborhood Character

SUMMARY OF EFFECTS	EFFECT FOR ALL TOLLING SCENARIOS	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
No notable change in neighborhood character, including in the Manhattan CBD, in the area close to the CBD boundary, and the rest of the 28-county area	The changes in traffic patterns on local streets are unlikely to change the defining elements of the neighborhood character of the Manhattan CBD.	No	No mitigation needed. No adverse effects
	Changes in parking demand near the 60th Street CBD boundary (including increases just north of 60th Street and decreases just to the south) would not create a climate of disinvestment that could lead to adverse effects on neighborhood character nor alter the defining elements of the neighborhood character of this area.	No	No mitigation needed. No adverse effects

The Manhattan CBD study area serves as the economic hub of the New York City region and includes a heterogeneous mix of neighborhoods. The CBD Tolling Alternative would decrease vehicular trips within most parts of the Manhattan CBD and increase transit, bicycle, and pedestrian trips near transit stations. Due to people shifting to other modes the Project-related changes in the number of people accessing the Manhattan CBD would not substantially change and would not noticeably affect the intensity of use of the Manhattan CBD study area. Changes in travel patterns brought on by the CBD Tolling Alternative would not adversely affect any particular industry in the Manhattan CBD. Pedestrian traffic in this area would likely increase due to mode shift away from automobiles, which would benefit land uses that rely on high levels of pedestrian traffic, particularly retail uses. This, in turn, would reinforce the established patterns of land use, heavy mixing of uses, and the very high density of development and intensity of use that are defining features of neighborhood character in the Manhattan CBD study area.

The 60th Street Manhattan CBD boundary study area is a high-density mixed-use district containing portions of several neighborhoods as well as a section of Central Park. The CBD Tolling Alternative would not result in any adverse effects on Central Park, and traffic reductions on certain roadways adjacent to and within the park would result in beneficial effects to the park. This study area would be affected by changes in driving behavior related to access to parking; in addition, implementation of a congestion toll at 60th Street would add complexity for those neighborhood residents who currently drive in the area for errands and other activities. However, because new parking garages are not likely to be developed in the place of existing uses, there would be no change in the mixed-use nature, established land use patterns,

and high development densities that are defining features of the area. Any increased complexity in finding parking would not affect the defining features of neighborhood character because ready access to parking is not a defining feature of neighborhood character in this area. For these reasons, the CBD Tolling Alternative would not adversely affect the 60th Street Manhattan CBD boundary study area.

The CBD Tolling Alternative would benefit neighborhood character in the 60th Street Manhattan CBD boundary study area. Pedestrian traffic would likely increase, which could benefit retail businesses in the neighborhood, reinforcing the established patterns of land use that are a defining feature of the area's neighborhood character. Any redevelopment of existing parking garages could also benefit neighborhood character by introducing more active uses and higher densities that are more aligned with the defining features of the area's neighborhood character.

Subchapter 4B, "Transportation: Highways and Local Intersections," concludes that with the implementation of standard traffic improvements, there would be no adverse traffic effects at local intersections. It also concludes that through implementation of Transportation Demand Measures, adverse traffic effects could be mitigated on highway segments where traffic volumes would increase. While the CBD Tolling Alternative would affect traffic operations on local streets and highways in neighborhoods near the Manhattan CBD, there would be no substantial change to the overall operation or character of these local streets or highways, including on emissions and noise (see Chapter 10, "Air Quality," and Chapter 12, "Noise"). Thus, there would be no potential for Project-related changes to local streets or highways to substantively alter the neighborhood character of the areas nearby.

Subchapter 4C, "Transportation: Transit," Subchapter 4D, "Transportation: Parking," and Subchapter 4E, "Transportation: Pedestrians and Bicycles," conclude that the CBD Tolling Alternative would not result in adverse effects to transportation conditions at transit hubs; Subchapter 5A, "Social Conditions: Population Characteristics and Community Cohesion," concludes that the CBD Tolling Alternative would not result in adverse effects from indirect residential displacement near transit hubs; and Chapter 6, "Economic Conditions," concludes that the CBD Tolling Alternative does not have the potential to substantively alter market conditions in neighborhoods surrounding transportation hubs. Therefore, there would be no potential for Project-related changes to transportation, social, or economic conditions at transit hubs to substantively alter defining features of neighborhood character near these transit hubs.

5C. Public Policy

5C.1 INTRODUCTION

This subchapter assesses the consistency of the CBD Tolling Alternative with public policies enacted or adopted by governmental bodies from the regional study area that are applicable to major transportation initiatives such as the Project. A public policy is a plan or program enacted by a government body to achieve a stated goal.

5C.2 PUBLIC POLICIES APPLICABLE TO THE PROJECT

This section describes existing public policies that are applicable to the Project. **Chapter 13, "Natural Resources,"** describes policies related to coastal zone management.

5C.2.1 OneNYC 2050: Building a Strong and Fair City, New York City's Strategic Plan

OneNYC 2050, New York City's strategic plan, includes initiatives related to the city's economic growth, sustainability, and resiliency.[1] New York City's plans for sustainable development address the need for reducing traffic congestion, improving air quality, and improving public transportation, among other goals. The City of New York plans to reduce congestion by implementing initiatives that include, but are not limited to, leveraging new technologies to enforce traffic laws; optimizing curb use by expanding bus and bike lanes, commercial loading/unloading zones, and curb safety designs; and addressing FHV congestion and vehicles circulating without passengers in the most congested parts of New York City (including driver incentives to reduce passenger circulation within the Manhattan CBD and using CBD tolling to limit cruising in and out of the Manhattan CBD).

The *OneNYC 2050* report notes that 67 percent of all trips in New York City in 2015 were made by taking public transit, walking, and bicycling—the highest of any large U.S. city. The report identifies the goal of increasing the transit, walking, and bicycling mode share to 80 percent of all trips by 2050, which requires reducing the share of trips taken by personal automobile from 31 percent to 16 percent. The initiatives identified to achieve that goal include, among others, implementing CBD tolling to reduce traffic.[2]

5C.2.2 Regional Transportation Plans

Transportation planning in metropolitan areas is guided by Federally mandated Metropolitan Planning Organizations (MPOs), which have the responsibility for addressing compliance with the Clean Air Act (see **Chapter 10, "Air Quality"**). The MPOs ensure that transportation projects conform to the states' plans to improve air quality, as delineated in their state implementation plans. **Chapter 10, "Air Quality," Section 10.4** provides discussion of the Project's relationship to the NYMTC Transportation Improvement Program and the New York State Implementation Plan.

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1 The City of New York. April 2019. *OneNYC 2050: Building a Strong and Fair City*. http://onenyc.cityofnewyork.us/strategies/onenyc-2050/.

2 The City of New York. April 2019. *OneNYC 2050: Building a Strong and Fair City*. Volume 8, Efficient Mobility, p. 24.

In the New York metropolitan region, New York City and five surrounding New York counties (Nassau and Suffolk Counties in Long Island; and Putnam, Rockland, and Westchester Counties north of New York City) are within the jurisdiction of NYMTC. Northern New Jersey is within the jurisdiction of the North Jersey Transportation Planning Authority (NJTPA). Mercer County, New Jersey, is within the jurisdiction of the Delaware Valley Regional Planning Commission, the MPO for the greater Philadelphia region. Orange County, New York, has a dedicated MPO—the Orange County Transportation Council; likewise, Dutchess County, New York, is under the jurisdiction of the Dutchess County Transportation Council. In Connecticut, Fairfield and New Haven Counties are split among the jurisdictions of five MPOs: the South Western Region MPO, the Housatonic Valley MPO, the Greater Bridgeport and Valley MPO, the Central Naugatuck Valley MPO, and the South Central Regional MPO. Each MPO must produce a regional transportation plan (sometimes referred to as a long-range transportation plan) with a long-term plan for the region's transportation system, which must be updated regularly. **Table 5C-1** provides information on each of the MPOs in the regional study area and their most recent regional transportation plans, and **Figure 5C-1** shows the jurisdiction of each of the MPOs.

NJTPA and NYMTC issued their most recent regional transportation plans in 2021. Both plans recognize the vital importance of reducing roadway congestion to assist the metropolitan area's sustainability and economic growth. NYMTC's plan, *Moving Forward: Your Region, Connected*, references the Project and describes congestion pricing as a strategy for reducing congestion and air pollution that would also raise funds to pay for additional transportation system improvements.[3] NJTPA's plan, *Plan 2050: Transportation, People, Opportunity*, describes "severe congestion in some locations, hampering commerce and commuting, and causing growing safety and environmental concerns"[4] as a key transportation challenge facing the region. Both plans highlight the need for congestion reduction in the New York and northern New Jersey metropolitan region to support existing, as well as future, transportation needs.

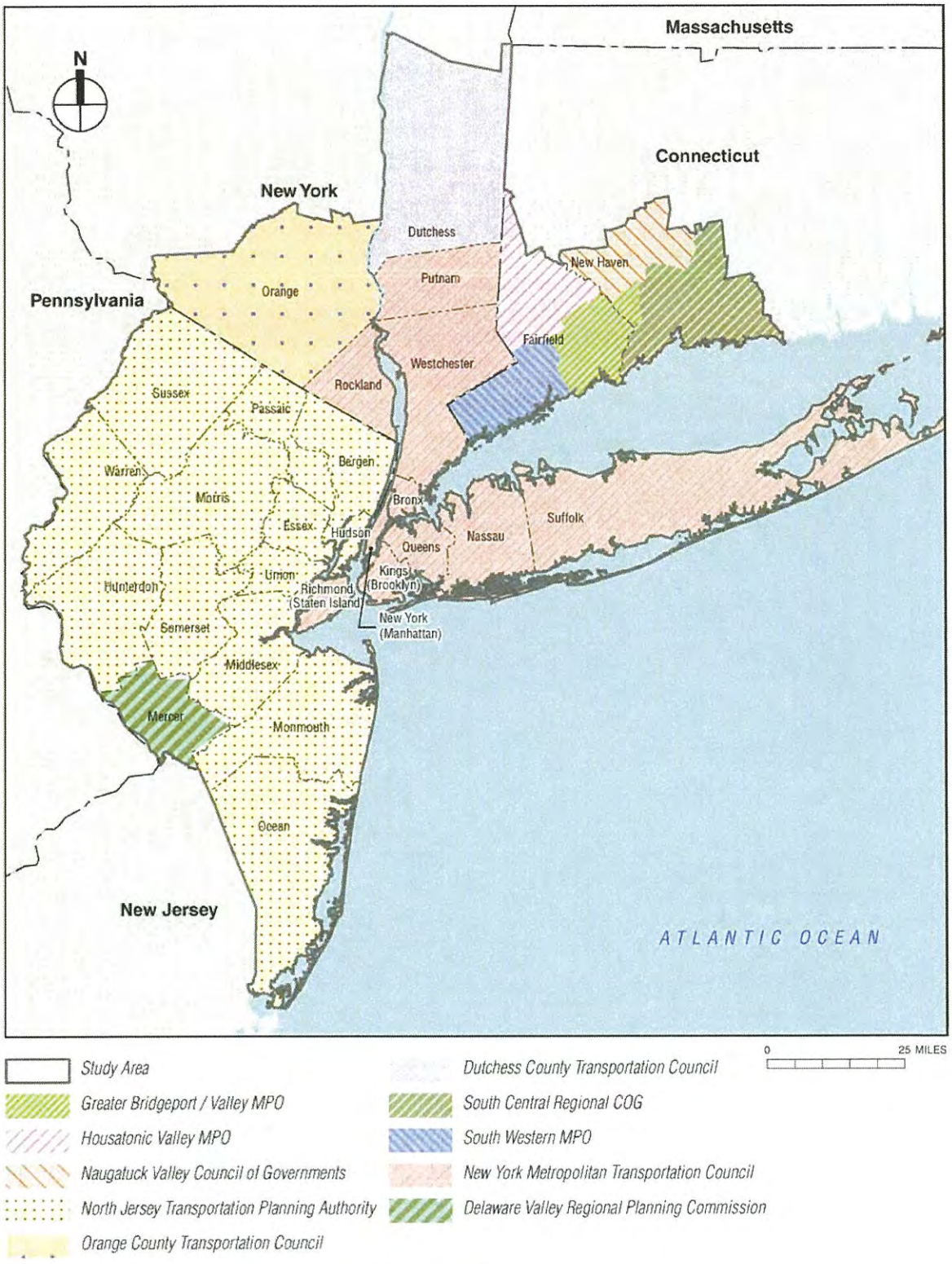
The other MPOs in the regional study area focus on counties outside the core of the New York City region. Their regional transportation plans share a focus on the importance of reducing congestion within each MPO's jurisdiction, and several of the plans specifically reference congestion pricing as a tool for achieving such reductions in their areas of focus.

[3] New York Metropolitan Transportation Council. September 2021. *Moving Forward: Your Region, Connected*. p. 211.
[4] North Jersey Transportation Planning Authority. September 2021. *Plan 2050: Transportation, People, Opportunity*. p. 1.

Table 5C-1. Metropolitan Planning Organizations in the Regional Study Area

METROPOLITAN PLANNING ORGANI ATION (MPO)	JURISDICTION	REGIONAL TRANSPORTATION PLAN	LIN
New York Metropolitan Transportation Council	New York City and Nassau, Putnam, Rockland, Suffolk, and Westchester Counties, New York	Moving Forward Your Region Connected (September 2021)	https://nymtcmovingforward.org/pdfs/nymtc_lrtp_2050_book.pdf
North Jersey Transportation Planning Authority	Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren Counties, New Jersey	Plan 20 0 ransportation People pportunity (September 2021)	https://www.njtpa.org/Planning/Plans-Guidance/Plan-2050.aspx
Delaware Valley Regional Planning Commission	Mercer County, New Jersey includes areas outside the regional study area	Connections 20 0 Plan for Greater Philadelphia (September 2021)	https://www.dvrpc.org/plan
Orange County Transportation Council	Orange County, New York	range County ong Range ransportation Plan 20 (November 2019)	https://www.orangecountygov.com/485/Long-Range-Transportation-Plan
Dutchess County Transportation Council	Dutchess County, New York	Moving utchess Forward (July 2021)	https://www.dutchessny.gov/Departments/Transportation-Council/Transportation-Plan.htm
South Western Region MPO	Part of Fairfield County, Connecticut	South estern Region Metropolitan Planning rgani ation 201 20 ong Range ransportation Plan (April 2019)	https://westcog.org/transportation/foundational-plans/long-range-transportation-plans/ swrmpo
Housatonic Valley MPO	Part of Fairfield County, Connecticut includes areas outside the regional study area	Housatonic Valley Metropolitan Planning rgani ation 201 20 ong Range ransportation Plan (April 2019)	https://westcog.org/transportation/foundational-plans/long-range-transportation-plans/ hvmpo
Greater Bridgeport and Valley MPO	Parts of Fairfield and New Haven Counties, Connecticut	Metropolitan ransportation Plan 201 20 Greater ridgeport Valley Metropolitan Planning rgani ation (March 2019)	https://metrocog-website.s3.us-east-2.amazonaws.com/Website+Content/MTP/MTP+Final+2019-03-28.pdf
Central Naugatuck Valley MPO	Part of New Haven County, Connecticut includes areas outside the regional study area	Metropolitan ransportation Plan for the Naugatuck Valley Planning Region 201 20 (April 2019)	https://nvcog.maps.arcgis.com/apps/MapSeries/index.html appid 95aa35d9cd7747e68d2205d86c15dbb0
South Central Regional MPO	Part of New Haven County, Connecticut	South Central Regional Metropolitan ransportation Plan 201 20 (April 2019)	https://scrcog.org/transportation-planning/metropolitan-transportation-plan/

Figure 5C-1. Metropolitan Planning Organizations in the Regional Study Area



Source: ArcGIS Online, https://www.arcgis.com/index.html; each MPO.

5C.2.3 New York State Smart Growth Public Infrastructure Policy Act

The Smart Growth Public Infrastructure Policy Act requires that State of New York infrastructure agencies, including TBTA and NYSDOT, ensure that public infrastructure projects are consistent with 11 smart growth criteria to minimize environmental degradation, loss of open space, and disinvestment in existing communities. Smart growth criteria encourage projects that focus on existing infrastructure in municipal centers and other developed areas. The following 11 smart growth criteria reflect the State of New York's commitment to sustainable development that strengthens existing communities and develops new ones without compromising the needs of future generations, all while reducing greenhouse gas emissions and mitigating future climate risks:

- To advance projects for the use, maintenance, or improvement of existing infrastructure
- To advance projects located in municipal centers
- To advance projects in developed areas or areas designated for concentrated infill development in a municipally approved comprehensive land use plan, local waterfront revitalization plan and/or brownfield opportunity area plan
- To protect, preserve and enhance the state's resources, including agricultural land, forests, surface and groundwater, air quality, recreation and open space, scenic areas, and significant historic and archeological resources
- To foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development and the integration of all income and age groups
- To provide mobility through transportation choices including improved public transportation and reduced automobile dependency
- To coordinate between state and local government and intermunicipal and regional planning
- To participate in community-based planning and collaboration
- To ensure predictability in building and land use code
- To promote sustainability by strengthening existing and creating new communities which reduce greenhouse gas emissions and do not compromise the needs of future generations, by among other means encouraging broad based public involvement in developing and implementing a community plan and ensuring the governance structure is adequate to sustain its implementation[5]

5C.2.4 Climate Leadership and Community Protection Act

The Climate Leadership and Community Protection Act, which became law in July 2019, establishes a comprehensive climate policy for New York State. The act requires that the State of New York reduce

[5] New York State Environmental Conservation Law, Article 6, State Smart Growth Public Infrastructure Policy Act. https://dos.ny.gov/system/files/documents/2020/08/smart-growth-public-infrastructure-act.pdf.

greenhouse gas emissions to 85 percent below 1990 levels by 2050 and offset the remaining 15 percent, establishing a "net-zero" economy. It also includes provisions that 70 percent of the state's electricity must come from renewable energy by 2030, and 100 percent of the state's electricity supply must be emissions free by 2040. The act seeks to ensure environmental justice by requiring that a minimum of 35 percent of investments from clean energy and energy efficiency funds be invested in ***[disadvantaged]*** communities. The act also creates a Climate Action Council, which ***[was tasked with creating]*** a plan for reducing emissions across all sectors of the economy, including the transportation sector. ***[The Council's Scoping Plan was released in December 2022. The Scoping Plan identifies the CBD Tolling Program as a strategy that will help the State of New York meet its emissions reduction goals, as a market-based policy that "can provide the dual benefits of discouraging more costly carbon-intensive behavior and providing a revenue source for investment in other strategies."[6]]***

5C.3 CONSISTENCY WITH APPLICABLE PUBLIC POLICIES

5C.3.1 No Action Alternative

The No Action Alternative would not implement a vehicular tolling program that would reduce traffic congestion in the Manhattan CBD in a manner that would generate revenue for future transportation improvements. Under the No Action Alternative, roadway traffic and transit ridership would experience normal background growth. NYMTC Best Practice Model (BPM) results indicate that congestion within the Manhattan CBD would continue to increase, with daily VMT in the Manhattan CBD growing between the 2023 and 2045 analysis years (see **Table 4A-2** in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling"**).[7] The No Action Alternative is not consistent with public policy, because it would not advance the goals of *OneNYC 2050*, regional transportation plans, the Smart Growth Public Infrastructure Policy Act, or the Climate Leadership and Community Protection Act.

5C.3.2 CBD Tolling Alternative

This section describes the potential effects of the CBD Tolling Alternative (all tolling scenarios) on the public policies described earlier in **Section 5C.2**. **Chapter 13, "Natural Resources,"** describes the CBD Tolling Alternative's consistency with coastal zone policies.

ONENYC 2050: NEW YORK CITY'S STRATEGIC PLAN

The CBD Tolling Alternative would be consistent with and supportive of the objectives of *OneNYC 2050*. *OneNYC 2050* explicitly recommends CBD tolling in its Initiative 26, "Reduce congestion and emissions." Regionwide, reductions in vehicle volumes and the corresponding shift of some journeys from auto to transit, walking, and cycling (see **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling"**) would contribute to reduced pollutant emissions (see **Chapter 10, "Air Quality"**), and toll

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6 *[New York State Climate Action Council, "Scoping Plan," December 2022. https://climate.ny.gov/resources/scoping-plan/.]*

7 As noted in **Chapter 1, "Introduction,"** MTA data for September 2021 shows that weekday vehicle traffic activity at TBTA crossings was approximately only 5 percent below pre-COVID-19 pandemic levels on average. September weekday data was adjusted to exclude Labor Day and Yom Kippur. Source: Metropolitan Transportation Authority Day-by-Day Ridership Numbers. https://new.mta.info/coronavirus/ridership.

revenue would facilitate a new funding source for MTA. Accordingly, the CBD Tolling Alternative would also help advance various other initiatives of *OneNYC 2050*, including the following:

- Initiative 16, "Design a physical environment that creates the conditions for health and well-being," which focuses in part on reducing air pollutant emissions.
- Initiative 20, "Achieve carbon neutrality and 100 percent clean energy," which emphasizes the importance of inducing mode shift from driving to transit, cycling, and walking.
- Initiative 24, "Modernize New York City's mass transit networks," which encourages facilitating a new funding source to support MTA projects.
- Initiative 25, "Ensure New York City's streets are safe and accessible," which envisions reprioritizing space on city streets where vehicular congestion has been reduced because of the Project.

The City of New York, through the New York City Department of Transportation, is a partner in the planning and development of the CBD Tolling Alternative.

REGIONAL TRANSPORTATION PLANS

The CBD Tolling Alternative would be consistent with and supportive of the objectives of the regional transportation plans from MPOs across the 28-county New York City region. Specifically, the CBD Tolling Alternative would implement a congestion pricing strategy to reduce congestion in the Manhattan CBD, consistent with the strategies detailed in NYMTC's *Moving Forward: Your Region, Connected*. It would also provide a new funding source for MTA's 2020–2024 Capital Program, which includes projects that are noted in *Moving Forward*.

BPM results show that VMT would increase in New Jersey under all tolling scenarios. However, these increases would be negligible (between 0.01 percent and 0.20 percent (see **Table 4A-7** in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling"**), and would be widely distributed across northern New Jersey. A nominal increase in VMT in New Jersey does not directly translate to an increase in congestion, and the projected change in VMT under the CBD Tolling Alternative would not preclude NJTPA from implementing its own programs and initiatives to reduce congestion in northern New Jersey. Therefore, the change in VMT associated with the CBD Tolling Alternative is not inconsistent with the NJTPA Regional Transportation Plan. NJTPA is a participating agency for the Project. NJTPA attended an agency coordination meeting with the Project Sponsors on September 10, 2021, and NJTPA will have an opportunity to review and comment on this EA. The Project Sponsors will also continue to coordinate with NJTPA as part of the Project's agency coordination activities.

SMART GROWTH PUBLIC INFRASTRUCTURE POLICY ACT

The CBD Tolling Alternative would be consistent with the 11 policies of the Smart Growth Public Infrastructure Policy Act. As shown in **Appendix 5C, "Social Conditions: New York State Smart Growth Public Infrastructure Policy Act Consistency Assessment,"** the Smart Growth checklist indicates that the CBD Tolling Alternative would advance projects to use, maintain, or support existing infrastructure, support activity in municipal centers, and promote mobility and sustainability.

CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT

The CBD Tolling Alternative would be consistent with and supportive of the objectives of the Climate Leadership and Community Protection Act. By reducing VMT *[within a 28-county region in New York, New Jersey, and Connecticut]*, the CBD Tolling Alternative would reduce emissions of key greenhouse gases *[(e.g., carbon dioxide and nitrous oxide)]* that are known to contribute to climate change. *[In the 12-county area including New York City, Long Island, and Putnam, Rockland, Westchester, Hudson and Bergen Counties, the CBD Tolling Alternative would reduce greenhouse gas emissions, in carbon dioxide equivalents, by 0.6 percent in 2023 and by 0.8 percent in 2045 under Tolling Scenario A (the scenario predicted to result in the lowest reduction in VMT).]* This would in turn contribute to reducing New York State's overall carbon emissions, consistent with the goals of the climate policy established by this act. *[Indeed, the CBD Tolling Alternative is identified as an emissions-reduction strategy in the Climate Action Council's Scoping Plan.]*

5C.4 CONCLUSION

By catalyzing regionwide reductions in vehicle volumes and VMT; precipitating mode shifts from auto to transit, walking, and cycling; reducing emissions of air pollutants and greenhouse gases; and providing a new funding source for MTA, the CBD Tolling Alternative would be consistent with and supportive of *OneNYC 2050*, regional transportation plans, and the Climate Leadership and Community Protection Act. By advancing a project to use, maintain, or support existing infrastructure, support activity in municipal centers, and promote mobility and sustainability, the CBD Tolling Alternative would be consistent with the Smart Growth Public Infrastructure Policy Act. **Table 5C-2** summarizes the effects of the Project.

Table 5C-2. Summary of Effects of the CBD Tolling Alternative Related to Public Policy

SUMMARY OF EFFECTS	EFFECT FOR ALL TOLLING SCENARIOS	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
No effect	In all tolling scenarios, the Project would be consistent with regional transportation plans and other public policies in place for the regional study area and the Manhattan CBD.	No	No mitigation needed. No adverse effects

6. Economic Conditions

6.1 INTRODUCTION

This chapter assesses the potential effects of implementing the CBD Tolling Alternative on economic conditions within the affected environment at both the regional and neighborhood levels.

6.2 METHODOLOGY

6.2.1 Framework for Economic Conditions Analysis

An assessment of economic conditions includes consideration of a project's effects on productivity, employment, and business activity. It also considers potential economic changes that could lead to the loss of critical goods and services and/or neighborhood investment.

Economic conditions may be affected by projects in three ways:

- Direct displacement, which occurs when residents or businesses must move from a site or sites as a direct result of a project. Examples include the redevelopment of an already occupied site for new uses or structures, or an easement or right-of-way that would take a portion of that occupied site or property, rendering it unfit for its current use.
- Indirect displacement (also known as secondary displacement), which occurs when a project alters one or more of the underlying forces that shape real estate market conditions in an area, resulting in conditions that cause the displacement of residents, businesses, or employees. Examples include lower-income residents forced out due to rising rents caused by a new concentration of higher income housing introduced by a project; a similar turnover of industrial to higher-paying commercial tenants spurred by the introduction of a successful office project in the area, or the introduction of a new use, such as residential; or increased retail vacancy resulting from business closure when a large new retailer saturates the market for particular categories of goods. Specific to the CBD Tolling Alternative, as noted in Chapter 18, "Agency Coordination and Public Outreach," during early public outreach conducted in the fall of 2021, members of the public raised concerns that the additional cost of a toll could "price out" residents, visitors, and businesses from the Manhattan CBD, forcing residents to leave and businesses to close.
- Change in the economic and operational conditions of an industry, within or outside a directly affected area, that results in a loss or substantial diminishment of a particularly important product or service. For example, changes in operational conditions of the taxi and FHV industries could create adverse socioeconomic effects if a substantial number of residents or workers who depend on taxis or FHVs would no longer be served, thereby affecting their access to transportation. As noted in Chapter 18,

"Agency Coordination and Public Outreach," during early public outreach conducted in the fall of 2021, taxi/FHV vehicle drivers raised concerns about economic hardship specific to the industry.

This Project would not result in any direct displacements, because the tolling infrastructure and tolling system equipment would not require the taking of any privately owned property. Thus, the analysis in this chapter focuses on potential indirect displacement effects and potential changes in the operations of certain industries, with analysis conducted at a regional level (**Section 6.3**) and at a localized, neighborhood level (**Section 6.4**). The assessments of potential economic benefits and adverse effects utilize guidance from the National Cooperative Highway Research Program's *Guidebook for Assessing the Social and Economic Effects of Transportation Projects*[1] and Chapter 5, "Socioeconomic Conditions," of the City of New York's 2021 *City Environmental Quality Review (CEQR) Technical Manual*.[2]

6.2.2 Study Areas

The study areas for this economic assessment are the geographic areas where the Project could alter economic conditions (either positively or negatively) to an extent that potential indirect displacement or adverse effects on specific industries could occur. The analysis assesses separate study areas for consideration of potential regional and local effects on economic conditions as set forth in **Section 6.3 and Section 6.4**, respectively.

6.2.3 Data and Information Sources

The following data sources were used in this analysis:

- Best Practice Model (BPM) results (see **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling"**)
- U.S. Census Bureau, 2015–2019 American Community Survey (ACS)[3]
- 2012–2016 ACS from the Census Transportation Planning Package (CTPP) data product[4]
- 2006–2010 and 2012–2016 ACS Journey to Work[5]
- U.S. Census Bureau Longitudinal Employer-Household Dynamics data, available through OnTheMap[6]
- U.S. Department of Labor, Bureau of Labor Statistics[7]
- Esri Business Analyst (private data provider, for retail sales estimates by geography)[8]

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1 https://www.ebp-us.com/en/projects/guidebook-assessing-social-economic-effects-transportation-projects.
2 https://www1.nyc.gov/assets/oec/technical-manual/05_Socioeconomic_Conditions_2021.pdf.
3 https://www.census.gov/programs-surveys/acs/data.html.
4 https://ctpp.transportation.org/2012-2016-5-year-ctpp/. The CTPP data product is based on the 2012–2016 ACS 5-Year Estimates and is produced by the American Association of State Highway and Transportation Officials (AASHTO). The CTPP provides custom tables describing residence, workplace, and trip from home to work. AASHTO has not updated the CTPP to reflect more recent ACS data.
5 https://www.census.gov/topics/employment/commuting.html.
6 https://onthemap.ces.census.gov/.
7 https://www.bls.gov/.
8 https://www.esri.com/en-us/arcgis/products/arcgis-business-analyst/overview.

- New York City Department of City Planning Neighborhood Tabulation Areas data, based on U.S. Census Bureau, 2013–2017 ACS[9]
- New York City Department of Consumer Affairs data related to off-street parking facilities, obtained from the New York City Department of Information Technology & Telecommunications NYCityMap program[10]
- U.S. Census Bureau, ZIP Code Business Patterns by Employment Size Class, 2018
- Various industry literature (specific sources cited by footnote throughout)

These data sources were developed prior to the onset of the COVID-19 pandemic, and therefore do not reflect workforce and employment changes resulting from the pandemic, including the substantial increase in work-from-home rates. At this time, it would be speculative to estimate long-term (post-pandemic) employment levels and work-from-home rates for the region. In addition, the use of more recent data would not be appropriate given the unusual circumstances that the pandemic created.

6.3 REGIONAL ASSESSMENT

6.3.1 Regional Study Area

Both regional and local market forces influence the potential for indirect residential or business displacement; therefore, both study areas are considered as part of the neighborhood-level assessment. At the regional level, the economic conditions assessment considers whether the Project could alter the economic and operational conditions of certain types of businesses or processes by changing the movement of workers, goods and services, and consumers into, out of, and through the Manhattan CBD. The 28-county region is the study area for this analysis. This regional study area is defined in **Chapter 3, "Environmental Analysis Framework,"** and illustrated in **Figure 3-1** of that chapter.

6.3.2 Affected Environment

This section describes current conditions with respect to the movement of workers, goods and services, and consumers in the regional study area. The region includes portions of three states—New York, New Jersey, and Connecticut—and is home to approximately 22.2 million residents. It is the largest metropolitan economy in the United States, accounting for nearly 10 percent of the U.S. economy.[11] New York City serves as the social and economic core of the region, and its 8.4 million residents represent about 37 percent of the regional study area's population.

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9 https://www1.nyc.gov/site/planning/data-maps/open-data/dwn-nynta.page.

10 http://maps.nyc.gov/doitt/nycitymap/.

11 New York City Department of City Planning. July 2018. "The Geography of Jobs NYC Metro Region Economic Snapshot." https://www1.nyc.gov/assets/planning/download/pdf/planning-level/housing-economy/nyc-geography-jobs-0718.pdf.

6.3.2.1 Employed Labor Force and Jobs

Approximately 11.0 million working labor force participants—those who identify as working members of the labor force regardless of where they work—live within the region (**Table 6-1**). Of that regional working labor force, approximately 4.1 million workers (about 37 percent) reside in New York City. Within New York City, the largest number of workers reside in Kings County (Brooklyn), followed closely by Queens County, and then New York County (Manhattan). The estimated 372,091 workers who live within the Manhattan CBD represent only about 3 percent of the region's employed labor force; Manhattan resident-workers living outside the Manhattan CBD account for approximately 5 percent of the region's employed labor force.

Table 6-1. Employed Labor Force and Jobs in the Regional Study Area

GEOGRAPHIC AREAS	EMPLOYED LABOR FORCE	EMPLOYED LABOR FORCE AS PERCENTAGE OF REGION	JOBS	JOBS AS PERCENTAGE OF REGION
New York City	4,083,215	37.2	4,579,070	43.1
Bronx County	601,341	5.5%	376,455	3.5%
Kings County (Brooklyn)	1,227,030	11.2%	855,115	8.0%
New York County (Manhattan)	905,475	8.3%	2,495,355	23.5%
Inside Manhattan CBD	372,091	3.4%	1,554,368	14.6%
Outside Manhattan CBD	533,384	4.9%	940,987	8.8%
Queens County	1,134,877	10.3%	721,775	6.8%
Richmond County (Staten Island)	214,492	2.0%	130,370	1.2%
Long Island Counties[1]	1,439,914	13.1	1,210,050	11.4
New York Counties North of New York City[2]	1,003,701	9.1	817,665	8.1
New Jersey Counties[3]	3,539,762	32.3	3,162,905	29.8
Connecticut Counties[4]	907,235	8.3	859,675	8.1
TOTAL	10,973,827	100.0	10,629,365	100.0

Source: ACS 2012–2016 5-Year Estimates, special tabulation—Census Transportation Planning Products.
Note: Region totals are the sums of the first five rows; percentages may not sum to 100 percent due to rounding. Numbers from different tables in the CTPP (e.g., total commuters to the Manhattan CBD) may not be identical due to rounding and different methods of estimating inherent in the CTPP.

1 Long Island counties include Nassau and Suffolk.
2 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
3 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
4 Connecticut counties include Fairfield and New Haven.

Approximately 6.9 million workers (about 63 percent of the region's employed labor force) reside outside of New York City in surrounding regional counties in Long Island, New York counties north of New York City, New Jersey, and Connecticut. Approximately 1.4 million workers (about 13 percent of the region's employed labor force) reside in Long Island counties, while just over 1.0 million workers (about 9 percent) reside in the region's New York counties north of New York City. Approximately 3.5 million workers (about 32 percent) reside in the region's New Jersey counties, while roughly 900,000 workers (about 8 percent) reside in the region's Connecticut counties. Over 90 percent of the region's workforce living outside New York City

commute to jobs located outside the Manhattan CBD, while approximately 75 percent of New York City residents commute to jobs outside the Manhattan CBD.

The region's employed labor force participants do not necessarily work near their places of residence and may not even work in the region (though most do).[12] **Table 6-1** also presents the numbers of jobs located within the various geographic areas that comprise the regional study area. In total, approximately 10.7 million jobs are within the region. Of those jobs, nearly 4.6 million (about 43 percent) are within New York City. More than half of the jobs within New York City are in Manhattan, and about one-third of all New York City jobs are within the Manhattan CBD. Not surprisingly, there is a very high concentration of total regional employment within the Manhattan CBD (nearly 15 percent of all regional jobs) relative to the percentage of the region's labor force who reside in the Manhattan CBD (approximately 3 percent). New Jersey counties and Long Island counties also have substantial concentrations of jobs, with 3.2 million (30 percent) and 1.2 million (11 percent) jobs, respectively. The New York counties north of New York City and the Connecticut counties have relatively fewer jobs, with both areas hosting fewer than 1 million (approximately 8 percent) of the region's jobs.

Figure 6-1 presents a spatial representation of the region's employment densities (jobs per square mile). As shown in the figure, the region's jobs are most heavily concentrated within the Manhattan CBD. **Figure 6-2** illustrates the distribution of the regional labor force's employment types by industry category (i.e., jobs held by the region's residents), as classified by the North American Industry Classification System (NAICS).[13] (**Appendix 6A, "Economic Conditions: Information on Industry Sectors of Regional Labor Force and Employment,"** provides detailed tabular data for this figure.) Relative to the regional study area as a whole, New York City's employed labor force holds notable proportions of the regional jobs in the following NAICS industry categories of Arts, Entertainment, and Recreation (with 45 percent of the regional employment held by New York City residents); Information (45 percent); Transportation and Warehousing, and Utilities (41 percent); and Other Services (41 percent). The two categories for which New York City residents comprise the lowest proportion of the region's employment are the Agriculture, Forestry, and Fishing industry category (approximately 18 percent) and the Manufacturing industry category (approximately 20 percent).

Long Island has a higher percentage of its working labor force employed within the Agriculture, Forestry, Fishing and Hunting, and Mining industry category (17 percent) relative to these counties' total percentage of regional labor force (13 percent).The working labor force from the New York counties north of New York City also contribute a disproportionately large percentage of employees to the Agriculture, Forestry, Fishing and Hunting, and Mining industry category (19 percent of the region's employees) relative to their overall contribution to the regional working labor force (9 percent). Otherwise, this geography's employment by industry category is generally distributed within a percentage point of its 9 percent contribution to overall employment in the region.

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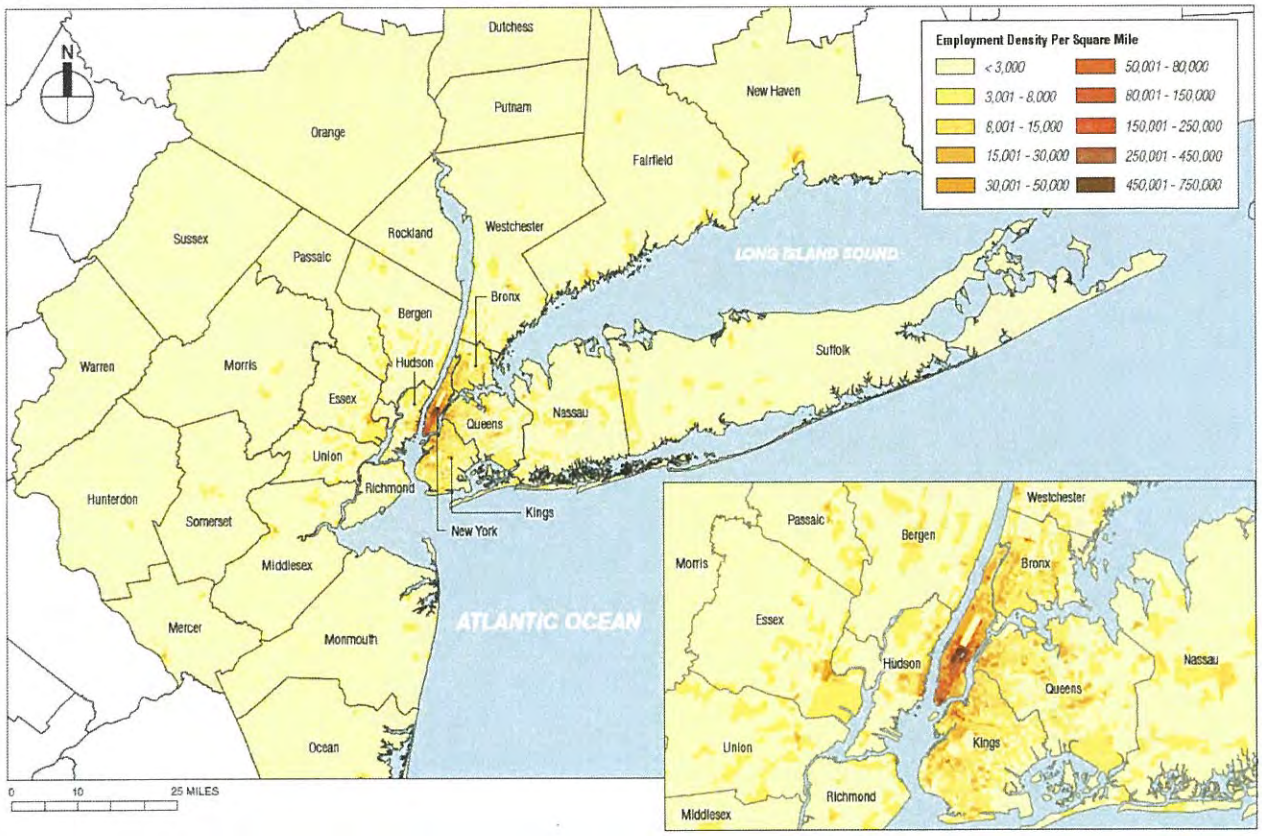
12 Based on U.S. Census Bureau Longitudinal Employer-Household Dynamics data available through OnTheMap, approximately 93 percent of jobs in the region are held by regional labor force participants; the remaining approximately 7 percent of jobs are held by labor force members from outside the regional study area. Conversely, approximately 95 percent of the employed region's labor force work inside of the region; the remaining 5 percent work outside the region.

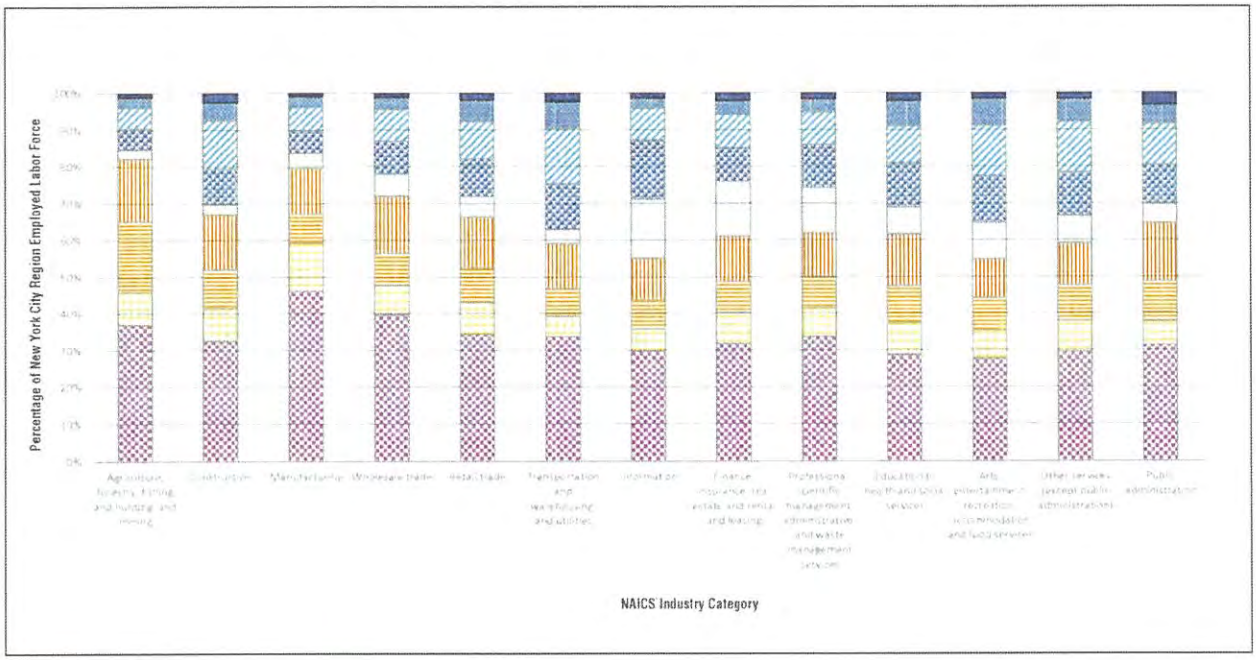
13 The standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy; https://www.census.gov/eos/www/naics/.

Figure 6-1. Employment Density in the Regional Study Area



Source: U.S. Census Bureau, CTPP, 2012–2016.
[Note: For an audio description, please go to the following link: https://www.youtube.com/watch?v=xn811kioBWQ&list=PLZHkn788ZQJPEY5zv-dr2gzkzMQFMgb_2&index=6.]

Figure 6-2. Regional Study Area Employed Labor Force by North American Industry Classification System Industry Category



Source: U.S. Census Bureau, ACS, 2015–2019 5-Year Estimates.

The New Jersey labor force has notable concentrations of employment in the Manufacturing and Wholesale Trade industry categories, constituting approximately 46 percent and 40 percent, respectively, of the region's employed labor force for these categories.

Jobs by Industry and Occupation

Figure 6-3 shows the types of jobs located within the region by NAICS industry category; **Appendix 6A, "Economic Conditions: Information on Industry Sectors of Regional Labor Force and Employment,"** provides detailed tabular data for this figure. Manhattan has the largest share of the regional study area's jobs in the Information category (44 percent of regional jobs); Finance, Insurance, Real Estate, and Rental and Leasing (41 percent); and Professional, Scientific, Management, Administrative, and Waste Management Services industry categories (33 percent). In contrast, only approximately 13 percent to 16 percent of the Manhattan labor force is employed in each of these three industry categories, indicating that Manhattan attracts workers from throughout the region to these jobs. The largest shares of jobs in the Manufacturing and Wholesale Trade categories are in New Jersey, with 46 percent and 39 percent, respectively, of the region's jobs in those categories.

Manhattan CBD Workers

On an average weekday, over 1.5 million people work within the Manhattan CBD (referred to in this chapter as Manhattan CBD workers).[14] **Table 6-2** shows the distribution of these workers' jobs by NAICS industry category.[15] The industry category employing the largest number of workers in the Manhattan CBD is Professional, Scientific, and Management, and Administrative and Waste Management Services; this industry category employs nearly one-quarter of all workers in the Manhattan CBD. Other prominent industry categories are Finance and Insurance, and Real Estate and Rental and Leasing (about 20 percent of Manhattan CBD workers), and Educational Services, and Health Care and Social Assistance (together, 12 percent of Manhattan CBD workers).

In addition to industry type, employment in the Manhattan CBD can also be assessed by occupation, using categories developed by the Bureau of Labor Statistics in its Standard Occupational Classification (SOC) System.[16] **Table 6-3** presents the same Manhattan CBD workers as **Table 6-2**, but with their job types distributed by SOC category. Of the 24 occupational categories, four categories employ over half of all Manhattan CBD workers: Management (nearly 18 percent); Office and Administrative Support (12 percent); Business and Financial (12 percent); and Sales and Retail (11 percent).

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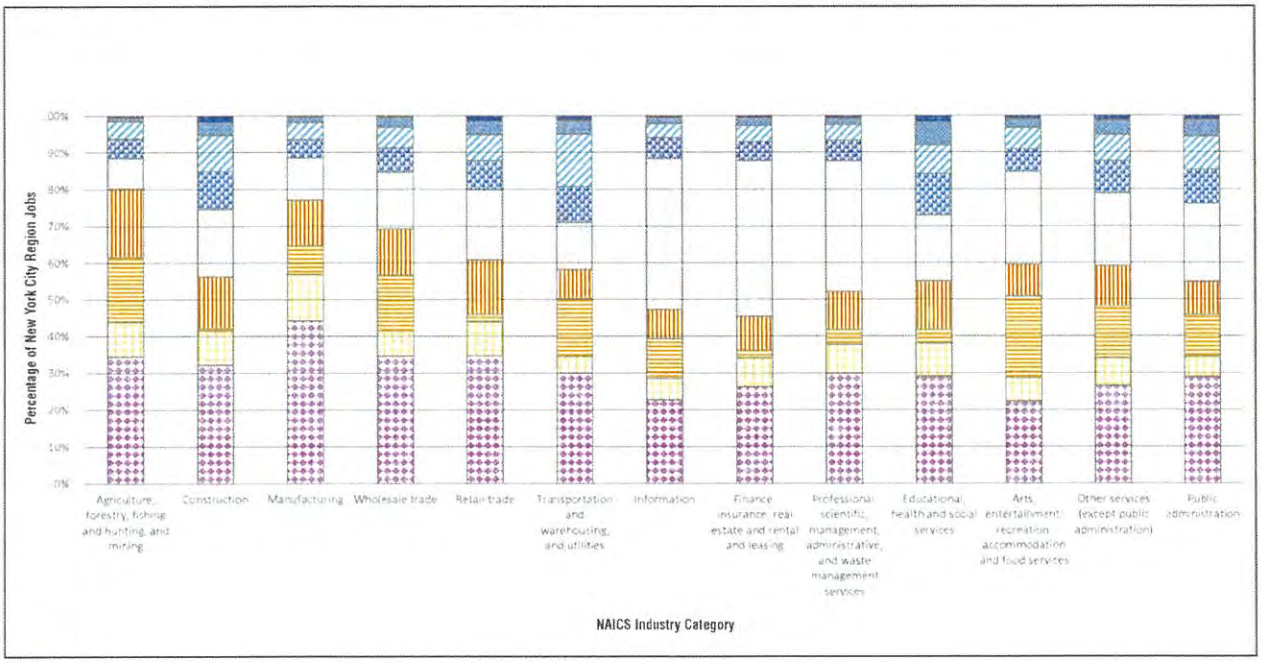
14 U.S. Census Bureau, CTPP, 2012–2016, Part 2.

15 The U.S. Census Bureau aggregates certain two-digit industry sectors into industry groupings, or categories, in order to provide statistically reliable estimates for census tract-level geographies. Specifically: Sector 11 – Agriculture, forestry, fishing and hunting is grouped with Sector 21 – Mining, Quarrying, and Oil and Gas Extraction; Sector 52 – Finance and insurance is grouped with Sector 53 – Real estate and rental and leasing; Sector 54 – Professional, scientific, and technical services is grouped with Sector 55 – Management of companies and enterprises as well as Sector 56 – Administrative support and waste management and remediation services; Sector 61 – Educational services is grouped with Sector 62 – Health care and social assistance; and Sector 71 – Arts, entertainment and recreation is grouped with Sector 72 – Accommodation and food services.

16 The SOC system is a Federal statistical standard used by Federal agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. https://www.bls.gov/soc/.

Figure 6-3. Regional Study Area Jobs by North American Industry Classification System Industry Category



Source: U.S. Census Bureau, ACS, 2015–2019 5-Year Estimates.

Table 6-2. North American Industry Classification System Industry Categories of Manhattan CBD Workers

NAICS CODES	INDUSTRY CATEGORIES	ALL MANHATTAN CBD WORKERS	PERCENTAGE OF ALL MANHATTAN CBD WORKERS
11, 21	Agriculture, forestry, fishing and hunting, and mining	1,087	0.1%
23	Construction	42,467	2.7%
31–33	Manufacturing	55,013	3.5%
42	Wholesale trade	39,271	2.5%
44–45	Retail trade	117,904	7.6%
48–49, 22	Transportation and warehousing, and utilities	41,420	2.7%
51	Information	120,408	7.8%
52–53	Finance and insurance, and real estate and rental and leasing	306,288	19.7%
54–56	Professional, scientific, and management, and administrative and waste management services	365,795	23.5%
61–62	Educational services, and health care and social assistance	192,030	12.4%
71–72	Arts, entertainment, and recreation, and accommodation and food services	150,708	9.7%
81	Other services (except public administration)	53,608	3.5%
92	Public administration	67,836	4.4%
928110	Armed forces	533	0.1%

Source: U.S. Census Bureau, CTPP, 2012–2016, Part 2.

Table 6-3. Standard Occupational Classification Categories of Manhattan CBD Workers

SOC GROUPS	OCCUPATIONAL CATEGORIES	MANHATTAN CBD WORKERS	PERCENTAGE OF ALL MANHATTAN CBD WORKERS
11-0000	Management occupations	273,591	17.6%
13-0000	Business and financial operations specialists	188,380	12.1%
15-0000	Computer and mathematical occupations	87,008	5.6%
17-0000	Architecture and engineering occupations	24,906	1.6%
19-0000	Life, physical, and social science occupations	12,939	0.8%
21-0000	Community and social service occupations	18,904	1.2%
23-0000	Legal occupations	70,961	4.6%
25-0000	Education, training, and library occupations	47,128	3.0%
27-0000	Arts, design, entertainment, sports, and media occupations	116,405	7.5%
29-0000	Healthcare practitioners and technicians occupations	39,678	2.6%
31-0000	Healthcare support occupations	21,419	1.4%
33-0000	Protective service occupations	38,222	2.5%
35-0000	Food preparation and serving related occupations	65,648	4.2%
37-0000	Building and grounds cleaning and maintenance occupations	43,580	2.8%
39-0000	Personal care and service occupations	33,540	2.2%
41-0000	Sales and related occupations	171,705	11.0%
43-0000	Office and administrative support occupations	190,963	12.3%
45-0000	Farming, fishing, and forestry occupations	494	0.1%
47-0000	Construction and extraction occupations	32,933	2.1%
49-0000	Installation, maintenance, and repair occupations	15,390	1.0%
51-0000	Production occupations	27,508	1.8%
53-0000	Transportation and material moving occupations	32,794	2.1%
55-0000	Armed forces	244	0.1%

Source: U.S. Census Bureau, CTPP, 2012–2016, Part 2.

Overall, the industry and occupation data show that relative to the region, the Manhattan CBD has high concentrations of office-based jobs such as business management, finance, and real estate, as well as service-based sectors like education and health care, retail, and arts and entertainment.

Small Businesses within the Manhattan CBD

In New York State, a small business is defined as one that has fewer than 100 employees and is independently owned and operated, as defined in Section 131 of the New York State's Economic Development Law. Small businesses with fewer than 20 employees, sometimes referred to as "Micro-businesses,"[17] would likely be more sensitive to goods delivery cost increases caused by the toll increases proposed under the CBD Tolling Alternative.

As shown in **Table 6-4**, there are approximately 77,121 businesses in the Manhattan CBD. Most of these businesses (approximately 91.0 percent) are small businesses, and a large majority of them (78.0 percent) are also considered micro-businesses. The distribution of small businesses (and micro-businesses) among industry types within the Manhattan CBD is similar to that of businesses of all sizes. The majority of businesses in the Manhattan CBD (approximately 68.9 percent) fall within one of five industry groupings including: Professional, Scientific, and Technical Services/Management/Administrative and Waste Management Services, which is the largest category (25.0 percent); followed by Finance and Insurance, and Real Estate and Rental and Leasing (15.7 percent); Accommodation and Food Services (10.1 percent); Retail Trade (9.5 percent); and Wholesale Trade (8.5 percent).

[17] Empire State Development (ESD) Annual Report on the State of Small Businesses, 2021.

Table 6-4. Small Businesses in the Manhattan CBD by Industry Category

NAICS CODES	INDUSTRY CATEGORIES	BUSINESSES IN THE MANHATTAN CBD (ALL SI ES)	PERCENTAGE OF ALL BUSINESSES IN THE MANHATTAN CBD	SMALL BUSINESSES (100 EMPLOYEES)		MICRO-BUSINESSES (20 EMPLOYEES)	
				TOTAL	PERCENTAGE OF BUSINESSES IN INDUSTRY CATEGORY	TOTAL	PERCENTAGE OF BUSINESSES IN INDUSTRY CATEGORY
23	Construction	1,541	2.0%	1,427	92.6%	1,202	78.0%
31–33	Manufacturing	1,499	1.9%	1,448	96.6%	1,307	87.2%
42	Wholesale trade	6,579	8.5%	6,407	97.4%	5,832	88.6%
44–45	Retail trade	7,309	9.5%	7,104	97.2%	6,331	86.6%
48–49, 21, 22	Transportation and warehousing; Utilities; Mining, quarrying and oil and gas extraction	557	0.7%	462	82.9%	393	70.6%
51	Information	3,648	4.7%	3,304	90.6%	2,762	75.7%
52–53	Finance and insurance, and real estate and rental and leasing	12,129	15.7%	11,520	95.0%	10,283	84.8%
54–56	Professional, scientific, and management, and administrative and waste management services	19,266	25.0%	14,930	77.5%	13,242	68.7%
61–62	Educational services, and health care and social assistance	5,948	7.7%	5,616	94.4%	4,908	82.5%
71–72	Arts, entertainment, and recreation,	3,621	4.7%	3,491	96.4%	3,134	86.6%
72	Accommodation and food services	7,818	10.1%	7,452	95.3%	5,007	64.0%
81	Other services (except public administration)	7,080	9.2%	6,922	97.8%	6,302	89.0%
99	Industries not classified	126	0.2%	122	96.8%	122	96.8%
	Total[1]	77,121		70,205	91.0	60,825	78.9

Source: U.S. Census, ZIP Code Business Patterns by Employment Size Class for 5-digit ZIP Code level (2018).
Note: Data on sectors with fewer than three establishments are withheld to avoid disclosing the operations of an individual employer, but those firms are included in the total count.

6.3.2.2 Means of Transportation to Work

The regional study area is well-served by public transit, with rail, buses, subways, and ferries providing commuters with public transportation options to the region's employment centers.[18] **Table 6-5** presents the means of commuting to work within the region by geographic area of origin (i.e., from where workers live). In total, approximately 29 percent of workers in the region commute by public transportation,[19] with the highest rates of public transportation utilization by workers commuting from Brooklyn (61 percent), the Bronx (60 percent), Manhattan (59 percent), and Queens (51 percent). Within Manhattan, the rate at which workforce members commute by public transit is higher for residents living outside the Manhattan CBD as compared to those living within the Manhattan CBD (65 percent and 50 percent, respectively); however, the workforce living inside the Manhattan CBD has a much higher rate of walking to work—30 percent—as compared to 13 percent for Manhattan residents living outside the Manhattan CBD.

Table 6-5. Means of Transportation to Work for Regional Study Area's Workforce

GEOGRAPHIC AREA OF ORIGIN	CAR, TRUC , OR VAN (Drove Alone)	CAR, TRUC , OR VAN (Carpooled)	PUBLIC TRANSPORTATION (Excluding Taxi)	WAL ED	TAXICAB, MOTORCYCLE, BICYCLE, OR OTHER MEANS[1]	WOR ED AT HOME
New York City	22.3	4.5	56.0	10.0	3.0	4.3
Bronx County	23.5%	4.4%	59.8%	7.4%	2.0%	3.0%
Kings County (Brooklyn)	18.4%	4.1%	61.2%	8.7%	3.0%	4.6%
New York County (Manhattan)	6.0%	1.9%	58.8%	20.4%	5.7%	7.2%
Inside Manhattan CBD	4.6%	1.4%	49.7%	30.2%	7.0%	7.1%
Outside Manhattan CBD	7.0%	2.2%	65.3%	13.4%	4.9%	7.3%
Queens County	32.4%	6.3%	51.2%	5.8%	1.6%	2.7%
Richmond County (Staten Island)	56.3%	7.7%	29.7%	2.6%	1.1%	2.7%
Long Island Counties[2]	74.2	7.4	11.5	1.8	1.1	4.0
New York Counties North of New York City[3]	66.2	8.3	14.3	4.1	1.6	5.5
New Jersey Counties[4]	68.9	7.9	13.5	3.1	1.9	4.7
Connecticut Counties[5]	75.1	8.3	7.1	2.9	1.3	5.4
TOTAL	52.6	6.6	28.5	5.5	2.1	4.6

Source: U.S. Census Bureau, ACS 2015–2019 5-Year Estimates.
Note: Percentages may not sum to 100 percent due to rounding.

1. The source ACS survey does not include an FHV category, only "car, truck, or van" and "taxicab." Those commuting by FHV may select taxi or car, truck, or van, depending on how they interpret the survey question.
2. Long Island counties include Nassau and Suffolk.
3. Counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
4. New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
5. Connecticut counties include Fairfield and New Haven.

18 Unless otherwise noted, the terms "public transportation" and "transit" are used interchangeably throughout this chapter.
19 In 2019 the regional study area's rate of commutation by public transportation was higher than the rate for the 10 largest metropolitan areas in the United States, with the exception of the District of Columbia, where 35.7 percent of the workforce commuted by public transportation (Source: U.S. Census Bureau, ACS, 2015–2019 5-Year Estimates).

The region's workforce living outside New York City has a lower rate of commutation by public transportation compared to New York City's resident-workers. The workforce living in Fairfield and New Haven Counties in Connecticut has the lowest rate of commutation by public transportation in the region at about 7 percent, followed by Long Island counties (12 percent) and the region's New Jersey counties and counties north of New York City (both 14 percent). The primary reasons for these lower rates are threefold:

- A higher percentage of the workforce living outside New York City does not commute to the Manhattan CBD, but rather, they commute to less transit-accessible locations outside New York City. Over 90 percent of the region's workforce living outside New York City, and 75 percent of New York City residents commute to jobs located outside of the Manhattan CBD.
- The region's public transportation system is not as readily accessible outside New York City. For example, east–west travel by transit in Westchester County often requires circuitous routes via Metro-North Railroad into Manhattan (125th Street or Grand Central Station) to switch lines or by limited east–west bus routes.
- Workforce members living outside of New York City are more likely to live in households with an available vehicle, leading to a higher propensity to drive to work irrespective of public transportation options. Outside of New York City within the region, approximately 94 percent of the workforce live in households that have access to at least one vehicle; within New York City, approximately 55 percent of the workforce live in households with access to at least one vehicle.[20]

Given the breadth of public transportation options to, from, and within the Manhattan CBD, workers commuting to the Manhattan CBD have a much lower rate of auto commuting relative to the broader regional and New York City workforce. As shown in **Table 6-6**, approximately 53 percent of all regional workforce members drive to work alone. For New York City residents in the workforce, approximately 22 percent drive to work alone, while only 9 percent of Manhattan CBD jobs are held by workers who drive to work alone.

Table 6-6. Means of Transportation to Work for the Regional Study Area and New York City Workforce vs. Commuters to the Manhattan CBD

WOR ER TYPE	CAR, TRUC , OR VAN (Drove Alone)	CAR, TRUC , OR VAN (Carpooled)	PUBLIC TRANSPORTATION (Excluding Taxi)	WAL ED	TAXICAB, MOTORCYCLE, BICYCLE, OR OTHER MEANS[1]	WOR ED AT HOME
Regional Workforce	52.6%	6.6%	28.5%	5.5%	2.1%	4.6%
New York City Workforce	22.3%	4.5%	56.0%	10.0%	3.0%	4.3%
Commuters to the Manhattan CBD	9.0%	2.3%	85.7%	1.2%	1.8%	N/A

Sources: Regional and New York City workforce data from U.S. Census Bureau, ACS 2015–2019 5-Year Estimates; Manhattan CBD data from U.S. Census Bureau, CTPP, 2012–2016.

Note: Percentages may not sum to 100 percent due to rounding.

1 The source ACS survey does not include a FHV category, only "car, truck, or van" and "taxicab." Those commuting by FHV may select taxicab or car, truck, or van, depending on how they interpret the survey question.

20 U.S. Census Bureau, ACS, 2015–2019 5-Year Estimates, Table B08014. **Subchapter 5A, "Social Conditions: Population Characteristics and Community Cohesion,"** provides additional information on vehicle ownership within the region.

6.3.2.3 Means of Transportation to Work for Different Industry Categories

Table 6-7 presents how the region's workforce commutes to work based on the type of industry in which they are employed. Those NAICS industry categories with the lowest rates of commutation by public transportation—Armed Forces (12 percent) and Agriculture, Forestry, Fishing and Hunting, and Mining (13 percent)—have notably higher rates of working from home (both about 11 percent, compared to under 5 percent for the region).[21] Armed forces workers also have the highest rate of walking to work, likely because many workers live at a military base. Other NAICS industry categories with relatively low rates of commutation by public transit include Manufacturing (17 percent); Wholesale Trade (20 percent); Transportation and Warehousing, and Utilities (21 percent); and Construction (24 percent). These industries are not concentrated in the Manhattan CBD, which is highly accessible via public transportation. Many industries within these categories require facilities with large footprints, which are less likely to be within dense urban areas that are highly transit-accessible. Conversely, those industry categories with the highest rates of commutation by public transportation—including Information (42 percent); Finance and Insurance, and Real Estate and Rental and Leasing (39 percent); and Arts, Entertainment, and Recreation, and Accommodation and Food Services (36 percent)—are all industries with a high concentration of jobs in Manhattan, which is highly accessible via public transportation.

[21] U.S. Census Bureau, ACS 5-Year Estimates 2015–2019, Means of Transportation to Work, Workers 16 years and over. The 2019 ACS estimates are from prior to the onset of the COVID-19 pandemic, and therefore do not reflect the substantial increase in work-from-home rates since the onset of the pandemic. Now that residents may again travel freely and many businesses have resumed operations, activity levels have been increasing. At this time, it would be speculative to estimate long-term (post-pandemic) work-from-home rates for the region.

Table 6-7. Means of Transportation to Work for Regional Study Area Employed Workforce by NAICS Industry Category

NAICS CODES	INDUSTRY CATEGORIES	CAR, TRUC , OR VAN (Drove Alone)	CAR, TRUC , OR VAN (Carpooled)	PUBLIC TRANSPORTATION (Excluding Taxi)	WAL ED	TAXICAB, MOTORCYCLE, BICYCLE, OR OTHER MEANS[1]	WOR ED AT HOME
11, 21	Agriculture, forestry, fishing and hunting, and mining	59.2%	8.4%	12.5%	6.3%	2.2%	11.3%
23	Construction	56.4%	11.7%	23.8%	2.6%	2.0%	3.5%
31–33	Manufacturing	64.7%	9.2%	16.9%	3.4%	1.9%	4.0%
42	Wholesale trade	61.3%	7.5%	20.2%	3.3%	1.7%	6.1%
44–45	Retail trade	54.5%	7.2%	26.2%	7.1%	2.1%	2.9%
48–49, 22	Transportation and warehousing, and utilities	64.3%	6.4%	21.3%	2.9%	2.8%	2.4%
51	Information	38.7%	3.8%	42.3%	5.1%	2.5%	7.6%
52–53	Finance and insurance, and real estate and rental and leasing	42.3%	4.0%	39.4%	5.7%	2.2%	6.4%
54–56	Professional, scientific, and management, and administrative and waste management services	42.5%	5.5%	35.0%	4.9%	2.3%	9.8%
61–62	Educational services, and health care and social assistance	57.7%	6.3%	25.1%	6.3%	1.7%	2.9%
71–72	Arts, entertainment, and recreation, and accommodation and food services	41.6%	7.3%	35.8%	8.3%	3.4%	3.6%
81	Other services (except public administration)	48.9%	7.8%	28.4%	7.7%	2.2%	5.0%
92	Public administration	64.7%	5.5%	24.5%	2.8%	1.0%	1.5%
928110	Armed forces	56.7%	4.5%	11.8%	13.4%	2.9%	10.7%
	TOTAL	52.6	6.6	28.5	5.5	2.1	4.6

Source: U.S. Census Bureau, ACS, 2015–2019 5-Year Estimates.

Notes: Industry category percentages may not sum to 100 percent due to rounding.

[1] The source ACS does not include a FHV category, only "car, truck, or van" and "taxicab." Those commuting by FHV may select taxicab or car, truck, or van, depending on how they interpret the survey question.

6.3.2.4 Commuting Into, Out of, and Within the Manhattan CBD

Given that the Project would directly affect workers who drive into, out of, and within the Manhattan CBD, this section evaluates auto commuters who are concentrated in any specific regional industries, with particular focus on jobs within the Manhattan CBD. The most recent ACS provides limited data describing the workplace industry and occupational categories of workers commuting via automobile (not including taxis); estimates for the Manhattan CBD alone are not available. The most detailed estimates describe only those working in Manhattan as a whole, but these data reveal a correlation between commute mode and employment categories. As shown in **Table 6-8**, the rate of workers driving to Manhattan jobs is highest in industry categories representing small fractions of all Manhattan jobs (see **Figure 6-3**). This is especially true for Manhattan workers holding jobs in the Transportation, Warehousing, and Utilities category. Fewer than 4 percent of Manhattan workers hold jobs within these industries, but nearly 35 percent of those workers drive to work.

Table 6-8. Manhattan Workers Who Commute by Auto by NAICS Industry Category

NAICS CODES	INDUSTRY CATEGORIES	MANHATTAN WOR ERS	PERCENTAGE OF ALL MANHATTAN WOR ERS	PERCENTAGE OF WOR ERS IN INDUSTRY COMMUTING BY AUTO
11, 21	Agriculture, forestry, fishing and hunting, and mining	1,914	0.1%	22.2%
23	Construction	101,647	4.1%	25.5%
31–33	Manufacturing	77,446	3.1%	11.8%
42	Wholesale trade	51,839	2.1%	14.0%
44–45	Retail trade	197,906	7.9%	8.3%
48–49, 22	Transportation and warehousing, and utilities	85,112	3.4%	33.7%
51	Information	153,225	6.1%	9.0%
52–53	Finance and insurance, and real estate and rental and leasing	400,242	16.0%	9.6%
54–56	Professional, scientific, and management, and administrative and waste management services	486,114	19.5%	8.0%
61–62	Educational services, and health care and social assistance	458,573	18.4%	13.7%
71–72	Arts, entertainment, and recreation, and accommodation and food services	279,446	11.2%	8.1%
81	Other services (except public administration)	108,712	4.4%	11.8%
92	Public administration	93,187	3.7%	28.4%
928110	Armed forces	806	0.1%	21.0%
	TOTAL	2,496,169	100.0	12.2

Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.
Note: Percentage of all Manhattan workers may not sum to 100 percent due to rounding.

Within SOC grouped occupational categories, approximately 12 percent of all Manhattan workers drive to their jobs, but within certain occupational groupings, nearly 30 percent drive (**Table 6-9**). These SOC occupational groups (Military Specific occupations; Natural Resources, Construction, and Maintenance occupations; and Production, Transportation, and Material Moving occupations) include many different job classifications but together account for fewer than 10 percent of the jobs held by Manhattan workers.

Table 6-9. Standard Occupational Classification Categories for Manhattan Workers Who Commute by Auto

SOC GROUPS	OCCUPATIONAL CATEGORIES	MANHATTAN WOR ERS	PERCENTAGE OF ALL MANHATTAN WOR ERS	PERCENTAGE OF MANHATTAN WOR ERS IN OCCUPATION COMMUTING BY AUTO
11–29	Management, business, science, and arts	1,274,070	51.0%	10.4%
31–39	Service occupations	433,439	17.4%	12.2%
41–43	Sales and office occupations	546,553	21.9%	9.6%
45–49	Natural resources, construction, and maintenance occupations	116,716	4.7%	27.0%
51–53	Production, transportation, and material moving occupations	124,986	5.0%	27.5%
55	Military specific occupations	405	0.1%	29.1%
	TOTAL	2,496,169	100.0	12.2

Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.
Note: SOC data is not available at the level of detail provided in **Table 6-3** due to cross-tabulation by mode of transportation to work. The percentage of all Manhattan workers may not sum to 100 percent due to rounding.

Commuters to the Manhattan CBD

The following analysis provides insight on modal trends and identifies whether specific industries and occupations could be adversely affected by the CBD Tolling Alternative.[22] The data presented in **Table 6-2 and Table 6-3** describe jobs held by all Manhattan CBD workers. Commuters to the Manhattan CBD can be divided in two categories:

- Those commuting from residences outside the Manhattan CBD (Manhattan CBD commuters)
- Those commuting from residences within the Manhattan CBD (Manhattan CBD resident-workers)

Nearly 1.3 million workers (approximately 83 percent) are Manhattan CBD commuters, traveling to jobs within the Manhattan CBD from residences across the 28-county region.[23] The remaining, approximately

[22] For estimates specific to those workers commuting from outside the Manhattan CBD (and within the 28-county region) to jobs within the Manhattan CBD, the CTPP provides data products describing the employed labor force's commuting patterns, mode of travel to work, and industry/occupation sector distribution. Data tables are published at various geographic levels down to the census tract. The most recent estimates are based on the ACS 2012–2016 5-Year Estimates and reported in three parts: Part 1, by worker residence of origin; Part 2, by worker job location destination; and Part 3, paired by worker origin and destination. The availability and provided detail of the estimates are dependent on the CTPP part, geographic-level of detail, and number of variables cross-tabulated. The most detailed estimates of industry, occupation, and commuting mode of New York City workers are available only for Part 1 and Part 2 at the county level. The Part 1 and Part 2 estimates also provide detailed industry and occupation information for all workers residing in the 28-county region or those working within the Manhattan CBD. However, only CTPP Part 3 provides estimates specifically describing workers who commute to inside the Manhattan CBD from residences within the 28-county region. Isolated estimates of detailed industry/occupation by mode for Manhattan CBD workers commuting from outside the Manhattan CBD are not provided by the CTPP. However, the CTPP does provide detailed estimates of these variables without cross-tabulation.

[23] U.S. Census Bureau, CTPP, 2012–2016, Part 3.

one-fifth, of Manhattan CBD workers live within the Manhattan CBD and therefore are Manhattan CBD resident-workers.

Within the NAICS industry category groupings, all Manhattan CBD workers and Manhattan CBD commuters are distributed among industries at nearly the same rates (**Table 6-10**).

Table 6-10. Industry Categories for Manhattan CBD Workers and Manhattan CBD Commuters

NAICS CODES	INDUSTRY CATEGORIES	MANHATTAN CBD WOR ERS	PERCENTAGE OF MANHATTAN CBD WOR ERS BY INDUSTRY	COMMUTERS TO THE MANHATTAN CBD FROM ELSEHWERE	PERCENTAGE OF COMMUTERS TO MANHATTAN CBD BY INDUSTRY
11, 21, 23, 928110	Agriculture, forestry, fishing and hunting, and mining; + construction; + armed forces	44,087	2.8%	39,830	3.1%
31–33	Manufacturing	55,013	3.5%	45,848	3.6%
42, 44–45, 48–49, 22	Wholesale trade; + retail trade; + transportation and warehousing, and utilities	198,595	12.8%	168,195	13.3%
51, 52–53, 54–56	Information; + finance, insurance, real estate and rental and leasing; + professional, scientific, management, administrative, and waste management services	792,491	51.0%	619,984	48.9%
61–62	Educational, health and social services	192,030	12.4%	162,356	12.8%
71–72	Arts, entertainment, recreation, accommodation and food services	150,708	9.7%	127,069	10.0%
81, 92	Other services (except public administration); + public administration	121,444	7.8%	105,212	8.3%

Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.
Notes: Percentages may not sum to 100 percent due to rounding.

Approximately 99 percent of Manhattan CBD workers—and approximately 99 percent of the subset who commute from outside the Manhattan CBD—have jobs that are within one-half mile or about a 15-minute walk of a subway station or Select Bus Service (SBS) stop within the Manhattan CBD.[24] All of these jobs are within one-half mile of local bus service and/or ferry service. Based on FHWA Pedestrian Safety Guide for Transit Agencies, most people are willing to walk for 5 to 10 minutes, or approximately one-quarter to one-half mile to a transit stop, and people may be willing to walk considerably longer distances when accessing heavy rail services.[25] A 15-minute walk is considered reasonable for most trip purposes.[26] **Subchapter 4C, "Transportation: Transit,"** describes the regional transit network. The estimated 8,470 Manhattan CBD

[24] Express bus service from specific destinations outside the Manhattan CBD, such as bus routes from Staten Island and Queens, also serves the Manhattan CBD. Since these routes are from specific destinations and not available for other commuters within the Manhattan CBD, express bus stops within the Manhattan CBD are not included in this discussion.

[25] https://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/ch4.cfm#a.

[26] Yong Yang, PhD and Ana V. Diez-Roux, PhD, MD. "Walking Distance by Trip Purpose and Population Subgroups." *American Journal of Preventative Medicine*. March 2012. https://www.ajpmonline.org/article/S0749-3797(12)00240-1/fulltext.

employees who work greater distances from a subway station or SBS stop have a relatively high rate of auto commuting (1,770, or almost 15 percent, drive to work) but represent small fractions of all Manhattan CBD workers within any specific industry and occupational category (**Table 6-11**). When compared to the Manhattan CBD as a whole, workers traveling to Manhattan CBD locations farther from public transportation disproportionately hold jobs in the Information industry. An estimated 2,595 workers employed in Census Tract 135 in West Midtown (bounded by West 58th Street to the north, Tenth Avenue to the east, West 50th Street to the south, and the Hudson River to the west; **Figure 6-4**) are employed in the Information industry and represent 2.2 percent of all workers in the Manhattan CBD in the same industry. Census Tract 135 is home to several broadcasting studios.[27] Collectively the 8,470 workers account for less than 1 percent of Manhattan CBD employment across all industry and occupational categories.

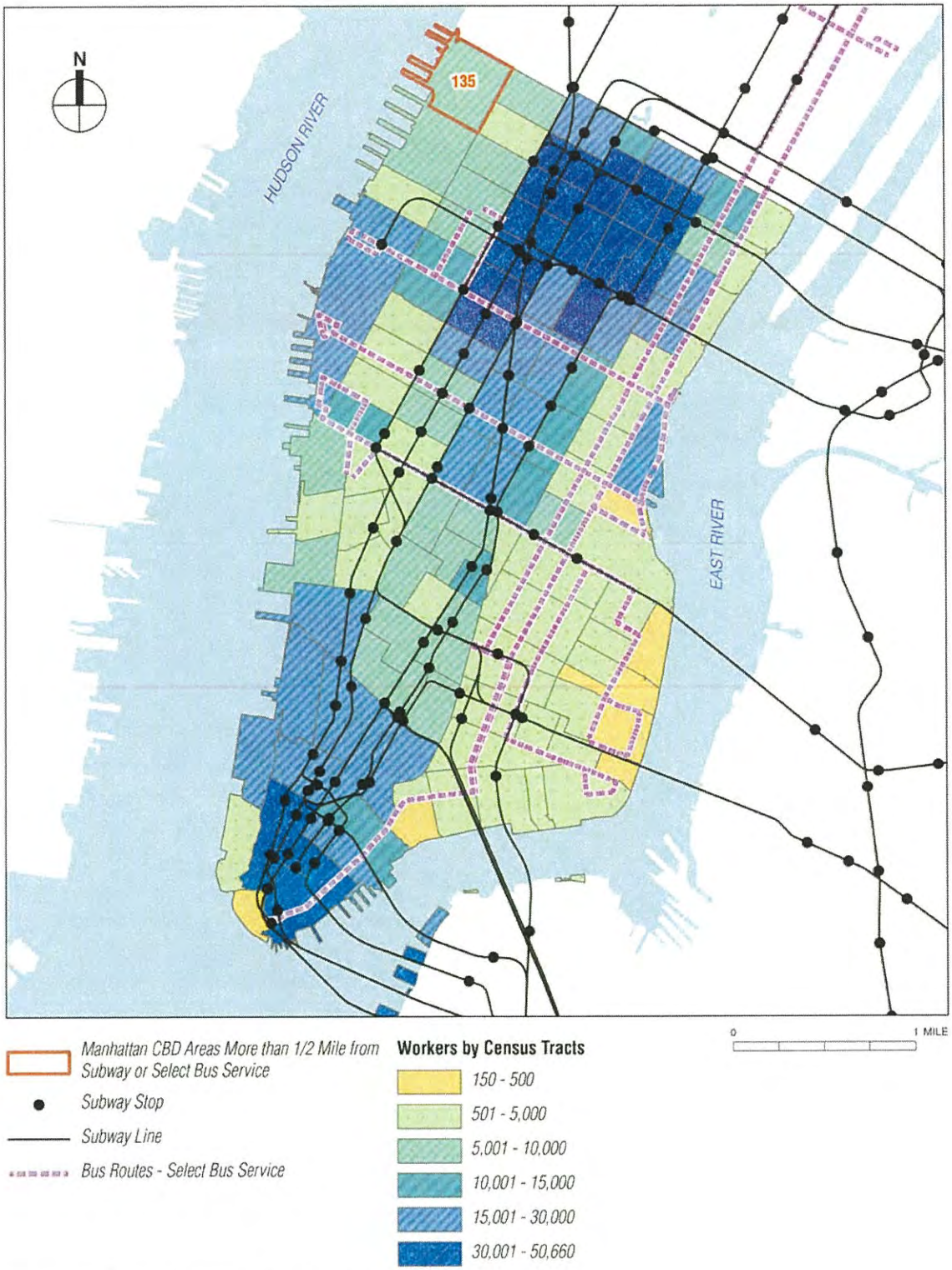
Table 6-11. Industry Categories for Manhattan CBD Jobs in Census Tracts More than One-Half Mile from a Subway or Select Bus Service Bus Stop

NAICS CODES	INDUSTRY CATEGORIES	JOBS WITHIN MANHATTAN CBD MORE THAN ONE-HALF MILE FROM SUBWAY STATION OR SBS BUS STOP	JOBS AS A PERCENTAGE OF ALL MANHATTAN CBD JOBS WITHIN INDUSTRY CATEGORY
11, 21	Agriculture, forestry, fishing and hunting, and mining	10	0.9%
23	Construction	310	0.8%
31–33	Manufacturing	365	0.7%
42	Wholesale trade	140	0.4%
44–45	Retail trade	1,080	1.0%
48–49, 22	Transportation and warehousing, and utilities	220	0.6%
51	Information	2,595	2.2%
52–53	Finance, insurance, real estate and rental and leasing	410	0.1%
54–56	Professional, scientific, management, administrative, and waste management services	1,065	0.3%
61–62	Educational, health and social services	1,415	0.7%
71–72	Arts, entertainment, recreation, accommodation and food services	565	0.3%
81	Other services (except public administration)	230	0.5%
92	Public administration	65	0.1%
928110	Armed forces	0	0.0%
	AREA ESTIMATE	8,470	0.5

Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.
Note: CTPP estimates for industry and occupational categories are derived separately from CTPP estimates of all workers within the same geographic area; therefore, the sum total of industry-level estimates may not equal the estimate for all workers.

[27] Broadcasting and telecommunications industries are subsets of the Information NAICS industry category.

Figure 6-4. Number of Manhattan Workers in Manhattan CBD Areas and Proximity to Subway Stops and Select Bus Service Routes



Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.

Car Commuters to the Manhattan CBD

As established in **Chapter 1, "Introduction,"** approximately 142,500 workers commute to the Manhattan CBD from around the region by car. Of these, more than one-third (approximately 57,000) drive from residences in New York City that are within one-half mile of a rail (commuter rail, subway, or Staten Island Railway) station, express bus stop, or SBS bus stop. Most of these workers have a relatively close option of using public transportation to reach the Manhattan CBD. The remaining car commuters to the Manhattan CBD originate from areas of New York City that are farther from public transportation, and from all other municipalities within the 28-county region (irrespective of proximity to public transportation).

Manhattan CBD Locations with the Largest Numbers of Car Commuters

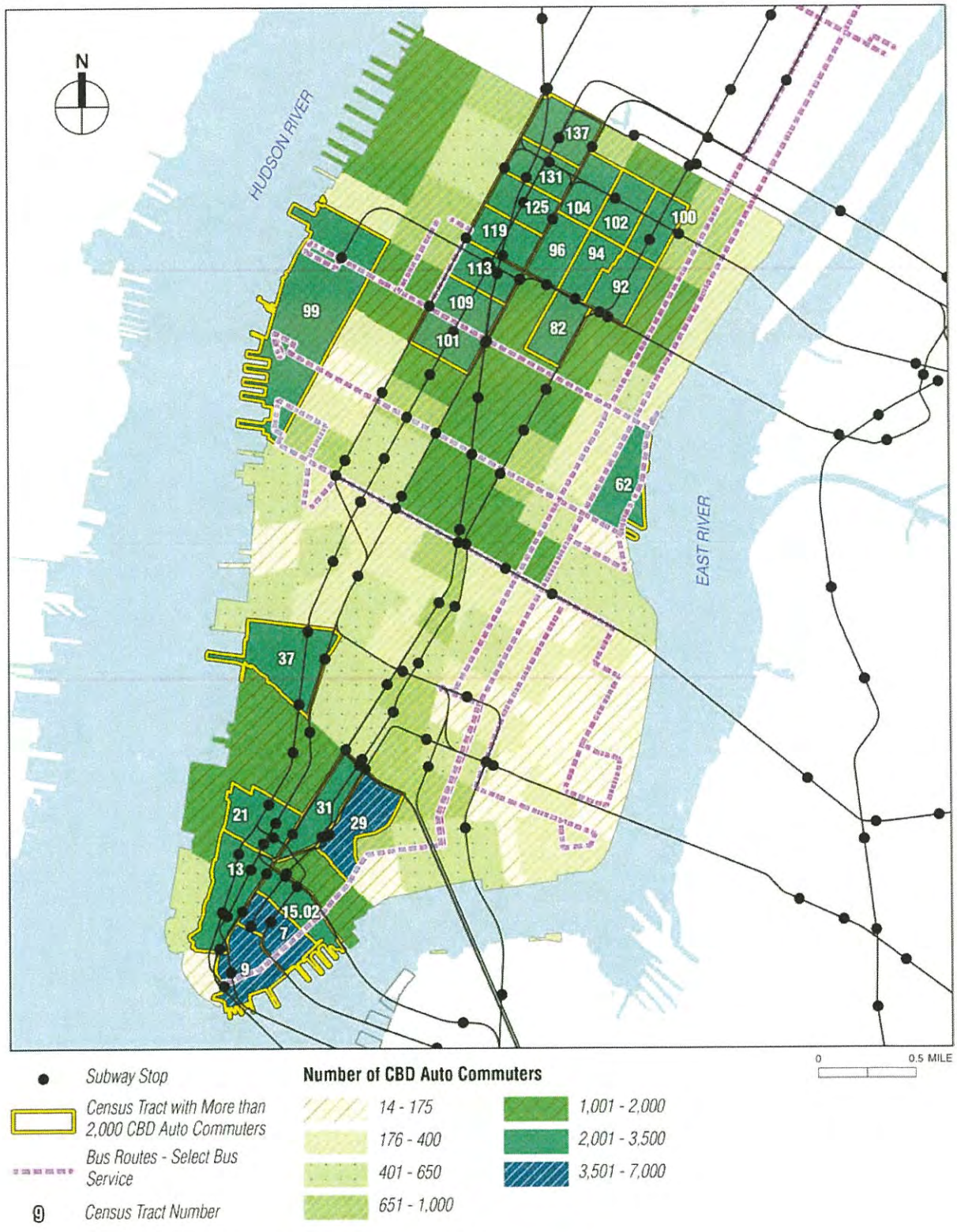
In terms of absolute numbers, car commuters to the Manhattan CBD generally drive to jobs in neighborhoods with high employment density, including central Midtown and Lower Manhattan (**Figure 6-5**). While the Manhattan CBD has 125 census tracts and covers approximately 9 square miles, approximately one-half (50.7 percent) of car commuters to the Manhattan CBD drive to jobs inside one of just 23 census tracts in the Manhattan CBD that occupy an area one-quarter the size of the entire Manhattan CBD. These census tracts are also the destination for over half (52.7 percent) of all Manhattan CBD workers, not including those working from home. Within the 23 census tracts with the largest numbers of car commuters, jobs are distributed among industries and occupations at rates similar to industry and occupational distribution across the entire Manhattan CBD (**Table 6-12**), suggesting that no industry or occupational categories are within this area for which commuters have a greater propensity or need to commute by auto.[28] It also suggests that the disproportionately high rate of Information industry workers in Census Tract 135 (on the far West Side and more distant from faster modes of public transportation) are not dependent upon the ability to commute by auto for industry-specific needs.

One notable exception (see **Table 6-12**) is the NAICS Finance, Insurance, Real Estate and Rental and Leasing industry category, which employs one-quarter of the workers in those 23 census tracts while this industry category accounts for one-fifth of the employment within the Manhattan CBD as a whole. Given the large number of employees within the census tracts, it is difficult to draw conclusions as to whether workers within this industry category have a higher rate of auto commuting.

As shown in **Table 6-13**, within the same 23 census tracts that have the highest number of car commuters, jobs are divided among occupations at percentages similar to the Manhattan CBD as a whole. However, the SOC Business and Financial Operations Specialists occupational category and the Legal occupational category have a slightly higher percentage of the jobs in the 23 census tracts than in the Manhattan CBD overall.

[28] Origin-destination estimates by industry are not available by mode for this unique geography, limiting the ability to draw more definitive conclusions from this data with respect to a correlation between industry types and auto commuting within the Manhattan CBD.

Figure 6-5. Number of Commuters Who Drive to Locations in the Manhattan CBD



Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.

Table 6-12. Industry Categories for Jobs in 23 Manhattan CBD Census Tracts with the Largest Numbers of Car Commuters

NAICS CODES	INDUSTRY CATEGORIES	WORKERS IN 23 CENSUS TRACTS[1]	PERCENTAGE OF WORKERS IN 23 CENSUS TRACTS	COMPARISON: PERCENTAGE OF WORKERS IN INDUSTRY CATEGORY, ALL MANHATTAN CBD WORKERS
11, 21	Agriculture, forestry, fishing and hunting, and mining	535	0.1%	0.1%
23	Construction	20,450	2.6%	2.7%
31-33	Manufacturing	23,760	3.0%	3.5%
42	Wholesale trade	16,375	2.1%	2.5%
44-45	Retail trade	46,195	5.8%	7.6%
48-49, 22	Transportation and warehousing, and utilities	18,860	2.4%	2.7%
51	Information	63,925	8.0%	7.8%
52-53	Finance, insurance, real estate and rental and leasing	201,760	25.3%	19.7%
54-56	Professional, scientific, management, administrative, and waste management services	202,405	25.4%	23.5%
61-62	Educational, health and social services	71,485	9.0%	12.4%
71-72	Arts, entertainment, recreation, accommodation and food services	64,765	8.1%	9.7%
81	Other services (except public administration)	21,400	2.7%	3.5%
92	Public administration	45,150	5.7%	4.4%
928110	Armed forces	142	0.1%	0.1%

Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.

[1] **Figure 6-5** identifies the 23 census tracts for which data is presented.

Table 6-13. Standard Occupational Classification Categories of Jobs in the 23 Manhattan CBD Census Tracts with the Largest Numbers of Car Commuters

SOC GROUPS	OCCUPATIONAL CATEGORIES	WORKERS IN 23 CENSUS TRACTS[1]	PERCENTAGE OF ALL WORKERS IN 23 CENSUS TRACTS	PERCENTAGE OF ALL MANHATTAN CBD WORKERS
11-0000	Management occupations	146,770	18.4%	17.6%
13-0000	Farmers and farm managers	55	0.1%	0.1%
15-0000	Business and financial operations specialists	116,260	14.6%	12.1%
17-0000	Computer and mathematical occupations	48,225	6.0%	5.6%
19-0000	Architecture and engineering occupations	12,590	1.6%	1.6%
21-0000	Life, physical, and social science occupations	5,735	0.7%	0.8%
23-0000	Community and social service occupations	7,840	1.0%	1.2%
25-0000	Legal occupations	48,845	6.1%	4.6%
27-0000	Education, training, and library occupations	14,845	1.9%	3.0%
29-0000	Arts, design, entertainment, sports, and media occupations	50,320	6.3%	7.5%
31-0000	Healthcare practitioners and technicians occupations	18,415	2.3%	2.6%
33-0000	Healthcare support occupations	8,795	1.1%	1.4%
35-0000	Protective service occupations	23,100	2.9%	2.5%
37-0000	Food preparation and serving related occupations	25,765	3.2%	4.2%
39-0000	Building and grounds cleaning and maintenance occupations	21,060	2.6%	2.8%
41-0000	Personal care and service occupations	12,340	1.5%	2.2%
43-0000	Sales and related occupations	84,920	10.7%	11.0%
45-0000	Office and administrative support occupations	100,205	12.6%	12.3%
47-0000	Farming, fishing, and forestry occupations	184	0.1%	0.1%
49-0000	Construction and extraction occupations	15,815	2.0%	2.1%
51-0000	Installation, maintenance, and repair occupations	7,660	1.0%	1.0%
53-0000	Production occupations	12,820	1.6%	1.8%
55-0000	Transportation and material moving occupations	14,605	1.8%	2.1%
	Armed forces	77	0.1%	0.1%

Source: U.S. Census Bureau, CTPP, 2012–2016, Part 2.

[1] **Figure 6-5** identifies the 23 census tracts for which data is presented.

By far, the greatest number of car commuters to the Manhattan CBD drive to jobs in Census Tract 29 in Lower Manhattan (see **Figure 6-5**). Census Tract 29 is north of the Brooklyn Bridge approach ramps and extends north to Canal Street. The tract includes parts of Chinatown and several large municipal buildings including 1 Centre Street, the Jacob Javits Federal Building, and the New York City Police Department (NYPD) headquarters. Of the estimated 16,453 workers commuting to jobs in Census Tract 29 from outside the Manhattan CBD, an estimated 6,832 workers (over 40 percent) drive to work. Approximately 50 percent more car commuters to the Manhattan CBD work in Census Tract 29 than in either Census Tracts 7 or 9, which have the second- and third-highest number of car commuters to the Manhattan CBD (4,561 and 4,345, respectively). Roughly 40 percent of those working in Census Tract 29 are employed in protective service occupations, a category including NYPD officers. Over the entire Manhattan CBD, only 2.5 percent of jobs are in this occupational category.

Manhattan CBD Locations with the Highest Percentages of Car Commuters

The previous section considered total volumes of car commuters; this section considers areas with the highest proportions of car commuters, irrespective of volume. Across different neighborhoods of the Manhattan CBD, the percentage of commuters originating from outside the Manhattan CBD who drive to work varies. Considering the locations where higher percentages of commuters drive to work could reveal whether specific industry types are correlated with the larger driving share for commuters.

As shown in **Figure 6-6**, CTPP data indicate that in general, the percentage of Manhattan CBD commuters driving to work correlates roughly with the distance of their job location from major transit hubs. This trend is particularly apparent in the areas of Midtown Manhattan north of 14th Street that are near the East River and the Hudson River, where more commuters drive to work than in the Midtown core. In the areas of the Manhattan CBD farther from major transit hubs and closer to the East River and the Hudson River (**Figure 6-6, Area 1**), 63,036 workers commute from outside the Manhattan CBD and approximately 19 percent of them drive to work. In the area between Third Avenue and Eighth Avenue (**Figure 6-6, Area 2**), approximately 8 percent of commuters coming from outside the Manhattan CBD drive to work.

The area of the Manhattan CBD with the highest rate of commuters by auto from locations outside the Manhattan CBD is an area of 11 census tracts in Manhattan's East Village and Lower East Side neighborhoods, including a portion of Chinatown (**Figure 6-6**). In each of these 11 census tracts, at least one-quarter of workers commuting from outside the Manhattan CBD drive to their jobs. Approximately 26,000 total workers commute to jobs in these 11 census tracts from outside the Manhattan CBD, which is just over 2 percent of all workers commuting into the Manhattan CBD from outside the Manhattan CBD. Of those, an estimated 10,416 workers (about 40 percent) drive to work from outside the Manhattan CBD.

Within the 11 census tracts with the highest rates of drivers, nearly half of all workers are employed in the public administration industry, while only 4 percent of all Manhattan CBD workers are employed in this industry (**Table 6-14**). Within NAICS occupational categories, over one-quarter of workers in the 11 census tracts are employed in protective service occupations, compared to under 3 percent across the Manhattan CBD (**Table 6-15**). The higher rate of auto commuting to these census tracts, and the high volume of auto commuting to Census Tract 29, are likely due to the availability of free parking and/or parking placards for some public administration employees.[29] The number of workers employed in Management, Business and Financial Operations Specialists, and Sales occupations are notably lower in these census tracts than in the Manhattan CBD overall.

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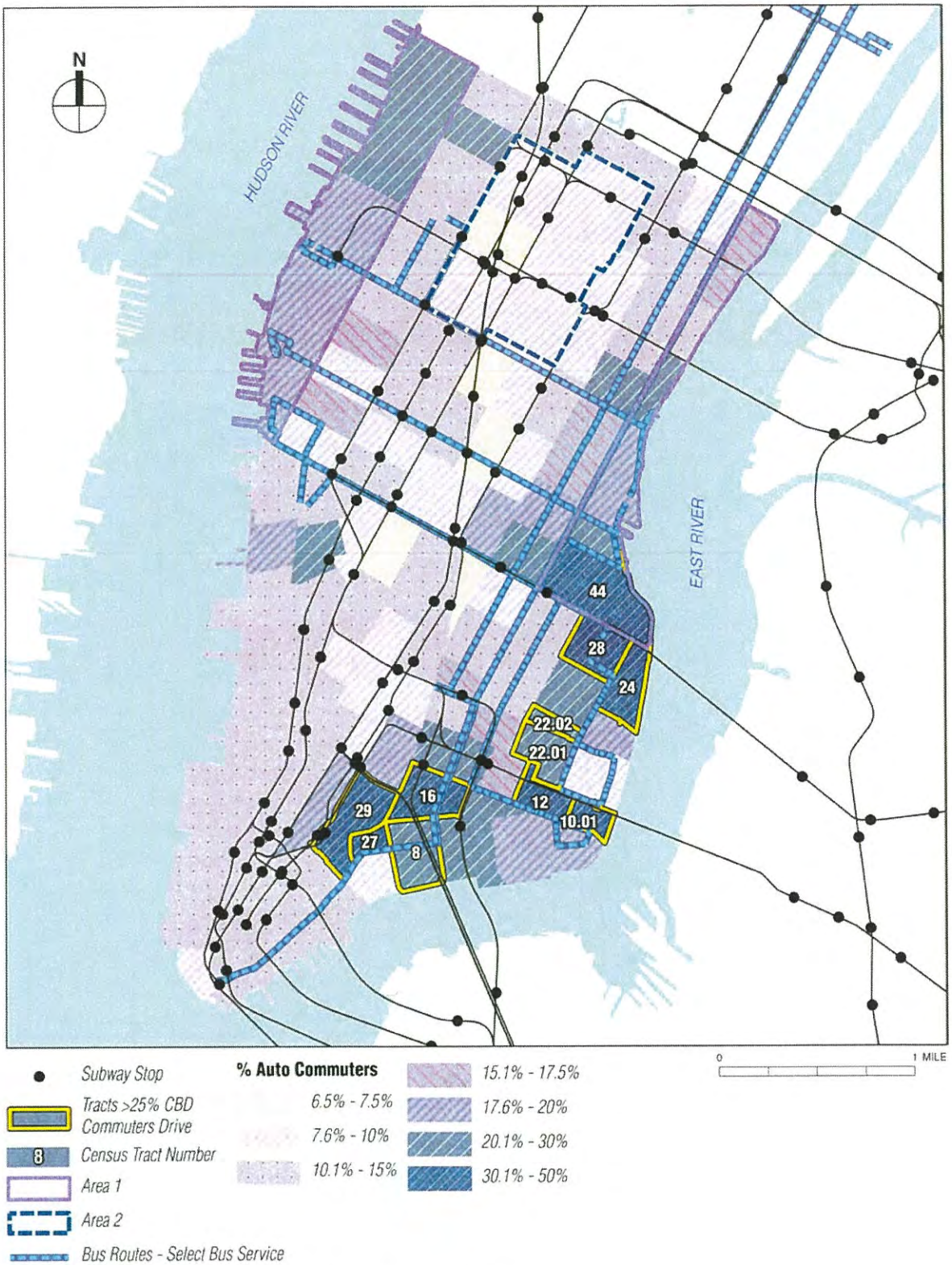
[29] Those who work for a government agency, the New York City Department of Education, clergy, non-profit organizations, or individuals with severe disabilities may be eligible to apply for a New York City parking permit (or "placard"). About 150,000 City of New York-issued parking permits are in circulation. Various permits are available, depending on the needs and occupation of the driver. Parking permits are generally rectangular placards that drivers place on their car's dashboard. Displaying these permits allows drivers to forgo certain parking restrictions. Some may also allow drivers to park in certain "No Parking" zones or "Authorized Vehicle Only" zones. Depending on the permit, drivers can park for a specified amount of the time without getting a parking ticket. This may include hours designated for alternate-side parking. The permits also allow drivers to park in spaces specifically designated for certain occupations. This may include drivers who are part of the press, non-profit organizations, physicians, and government workers. Usually "Authorized Parking Only" signs will specify the type of permit holder allowed to use the space. (Source: https://parkingtickets.org/ny-new-york/nyc-parking-permit.)

Figure 6-6. Percentage of Commuters Who Drive to Locations in the Manhattan CBD



Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.

Table 6-14. Industry Categories of Jobs in the 11 Manhattan CBD Census Tracts with the Highest Percentage of Car Commuters

NAICS CODES	INDUSTRY CATEGORIES	WORKERS IN 11 CENSUS TRACTS[1]	PERCENTAGE OF WORKERS IN 11 CENSUS TRACTS	COMPARISON: PERCENTAGE OF WORKERS IN INDUSTRY CATEGORY, ALL MANHATTAN CBD WORKERS
11, 21	Agriculture, forestry, fishing and hunting, and mining	35	0.1%	0.1%
23	Construction	613	1.9%	2.7%
31–33	Manufacturing	659	2.0%	3.5%
42	Wholesale trade	363	1.1%	2.5%
44–45	Retail trade	1,645	5.0%	7.6%
48–49, 22	Transportation and warehousing, and utilities	1,074	3.3%	2.7%
51	Information	254	0.8%	7.8%
52–53	Finance, insurance, real estate and rental and leasing	2,164	6.6%	19.7%
54–56	Professional, scientific, management, administrative, and waste management services	3,255	10.0%	23.5%
61–62	Educational, health and social services	4,755	14.6%	12.4%
71–72	Arts, entertainment, recreation, accommodation and food services	2,260	6.9%	9.7%
81	Other services (except public administration)	899	2.8%	3.5%
92	Public administration	14,690	45.0%	4.4%
928110	Armed forces	4	0.1%	0.1%

Source: U.S. Census Bureau, CTPP, 2012–2016, Parts 2 and 3.

[1] Figure 6-6 identifies the 11 census tracts for which data is presented.

Table 6-15. Standard Occupational Classification Categories of Jobs in the 11 Manhattan CBD Census Tracts with the Highest Proportions of Car Commuters

SOC GROUPS	OCCUPATIONAL CATEGORIES	WORKERS IN 11 CENSUS TRACTS[1]	PERCENTAGE OF WORKERS IN 11 CENSUS TRACTS	PERCENTAGE OF ALL MANHATTAN CBD WORKERS
11-0000	Management occupations	2,659	8.1%	17.6%
13-0000	Farmers and farm managers	0	0.0%	0.1%
15-0000	Business and financial operations specialists	965	3.0%	12.1%
17-0000	Computer and mathematical occupations	844	2.6%	5.6%
19-0000	Architecture and engineering occupations	224	0.7%	1.6%
21-0000	Life, physical, and social science occupations	205	0.6%	0.8%
23-0000	Community and social service occupations	715	2.2%	1.2%
25-0000	Legal occupations	2,035	6.2%	4.6%
27-0000	Education, training, and library occupations	1,654	5.1%	3.0%
29-0000	Arts, design, entertainment, sports, and media occupations	1,035	3.2%	7.5%
31-0000	Healthcare practitioners and technicians occupations	734	2.2%	2.6%
33-0000	Healthcare support occupations	799	2.4%	1.4%
35-0000	Protective service occupations	9,055	27.7%	2.5%
37-0000	Food preparation and serving related occupations	1,490	4.6%	4.2%
39-0000	Building and grounds cleaning and maintenance occupations	870	2.7%	2.8%
41-0000	Personal care and service occupations	765	2.3%	2.2%
43-0000	Sales and related occupations	2,050	6.3%	11.0%
45-0000	Office and administrative support occupations	4,089	12.5%	12.3%
47-0000	Farming, fishing, and forestry occupations	25	0.1%	0.1%
49-0000	Construction and extraction occupations	509	1.6%	2.1%
51-0000	Installation, maintenance, and repair occupations	460	1.4%	1.0%
53-0000	Production occupations	639	2.0%	1.8%
55-0000	Transportation and material moving occupations	855	2.6%	2.1%
	Armed forces	4	0.1%	0.1%

Source: U.S. Census Bureau, CTPP, 2012–2016, Part 2.

[1] **Figure 6-6** identifies the 11 census tracts for which data is presented.

Two of the census tracts in this area—Census Tracts 24 and 44 encompassing Stuyvesant Town, Jacob Riis Houses, and the Con Edison East River Generating Station (**Figure 6-6**)—have a particularly high percentage of commuters who drive. In these two census tracts, employees drive to work at nearly four times the average rate of the Manhattan CBD.[30] Despite this large percentage, these census tracts represent a small number of total car commuters to the Manhattan CBD (1,090 workers). More than 25 percent of jobs within these census tracts are in the Transportation, Warehousing and Utilities industry category, which includes jobs at the Con Edison Generating Station (the area's largest employer), as well as a New York City Department of Environmental Protection pumping station. Both facilities include large employee parking

[30] This information reflects conditions prior to implementation of an SBS route on the Lower East Side and the ferry stop along the East River serving Stuyvesant Town.

lots, suggesting that the availability of free employee parking could be encouraging workers to travel by car to their jobs. This area also has more available, free on-street parking relative to most locations within the Manhattan CBD because of its distance from the denser commercial areas. Based on CTPP 2012–2016 data, nearly 75 percent of car commuters to this area arrive at work before 8:00 a.m., which would allow them to avoid peak rush-hour conditions and more easily secure free on-street parking; however, atypical arrival times are not consistently found across census tracts with high auto-commutation rates.

Manhattan CBD Reverse Commuters

Based on CTPP 2012–2016 data, an estimated 114,591 Manhattan CBD residents commute to work at jobs outside the Manhattan CBD, with a majority working in other areas of New York City that are within close proximity to faster modes of public transportation. An estimated 16,663 (approximately 14.5 percent) of these Manhattan CBD reverse commuters drive to their jobs. None of these drivers are estimated to originate from locations in the Manhattan CBD that are distant from faster modes of public transportation. Approximately 1,200 Manhattan CBD reverse commuters commute by car out of the Manhattan CBD to work at other locations in Manhattan that are within one-half mile of a subway station. Approximately 4,000 additional Manhattan CBD residents drive to work outside Manhattan to one of the four remaining New York City boroughs. Approximately 90 percent travel to jobs within areas of New York City that are within one-half mile of a faster public transportation (subway, railroad, or express or SBS bus stop) and 540 drive to jobs in New York City that are more distant from public transportation. The majority of these 540 drivers go to jobs in Brooklyn and Queens, where they represent about 2 percent of employment in each community district.[31]

About 6,700 Manhattan CBD reverse commuters drive to work in New Jersey, representing a tiny fraction of New Jersey's employment.[32] The majority of these drivers commute to jobs in Bergen, Essex, or Hudson Counties, where they make up less than 1 percent of employment in each county. There are five New Jersey municipalities where car commuters from the Manhattan CBD account for between 1 and 2 percent of all employees.

6.3.2.5 Non-Work-Related Journeys

In addition to work-related journeys[33] discussed in the previous sections, consumer spending associated with non-work-related activities (e.g., dining, retail, entertainment, and health care spending) plays a large role in the regional economy. Many industries—including most notably Retail Trade, Arts, Entertainment and Recreation, and Accommodation and Food Services—are heavily dependent upon non-work-related consumer expenditures. According to Esri Business Analyst estimates, residents within the regional study area spend more than $342 billion annually on retail goods (including food and drink). In addition to the region's resident spending, visitors to New York City spent $44.2 billion in 2018. It is therefore important

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31 U.S. Census Bureau, CTPP, 2012–2016, Part 3.

32 This analysis focuses on the effect of changes to commuter patterns on economic conditions related to employment; therefore, this section discusses overall employment that could be affected.

33 As described in Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling," a journey is defined as round-trip travel between principal and anchor locations such as home, work, school, retail, and entertainment.

to consider whether the Project could alter non-work-related journeys within the region in a manner that could reduce spending and jeopardize the viability of any industry sectors.

6.3.2.6 Vehicle-Dependent Industries

While all industries are to a degree dependent on vehicle movement—for supplying workers, goods and services, and/or customers—the following sections discuss industries that have operations that inherently depend on the movement of vehicles into, out of, and through the Manhattan CBD. Because the Project would toll vehicles entering or remaining in the Manhattan CBD, the Project has the greatest potential to affect changes in consumer demand and/or operational conditions within these industries.[34] As noted in the *CEQR Technical Manual*, an assessment is appropriate if a project is expected to affect conditions within a specific industry; for example, a citywide regulatory change would adversely affect the economic and operational conditions of certain types of businesses or process may affect socioeconomic conditions in a neighborhood if (1) if a substantial number of residents or workers depend on the goods or services provided by the affected businesses; or (2) if it would result in the loss or substantial diminishment of a particularly important product or service within the city.[35]

Taxi and For-Hire Vehicle Industry

The following section describes the variety of taxis and FHVs:

- **Yellow cabs**: The New York City Taxi and Limousine Commission (TLC) has issued 13,587 medallions to allow drivers to operate yellow cabs throughout New York City. Fares for yellow cabs are metered based on rates set by the TLC. Some yellow cabs are owned and operated as part of a fleet and others are owned and operated independently. Some drivers may lease the medallion and the vehicle, others lease the medallion and own their vehicle, while other yellow cabs drivers own and operate their own medallion and vehicle. Passengers can arrange for service through street hails and through "e-hails" arranged through a mobile application by a TLC-approved company.
- **Green cabs**: The TLC created a program of street-hail livery cabs, also referred to as green cabs or borough taxis, in August 2013 to increase the availability of street-hail taxi service (rather than service available by calling in advance) outside of the core service area of Manhattan.[36] Street-hail livery cabs can accept trips in Manhattan north of East 96th Street and West 110th Street, and in any location in the boroughs outside of Manhattan. Green cabs can also pick up passengers at airports if the ride is pre-arranged through a dispatcher. Fares for street-hail trips are metered based on rates set by the TLC. Green cab drivers must use approved vehicles that meet specific requirements of the TLC but medallions are not required.

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34 As detailed in Chapter 2, "Project Alternatives," with the CBD Tolling Alternative, TBTA would toll vehicles entering or remaining in the Manhattan CBD via a cashless tolling system. At this time, the Project Sponsors consider vehicles that remain in the Manhattan CBD to be those that were not detected entering but must have been remaining in the Manhattan CBD since they were detected leaving.

35 Chapter 5, Section 200 of the 2021 *CEQR Technical Manual*. As noted in Chapter 5, Section 430 of the 2021 *CEQR Technical Manual*, an impact of a project that would substantially impair the ability of certain specific industries or categories or business to continue operating within New York City may be considered significant and adverse.

36 Prior to 2013, private livery cabs were offering non-metered and often informal and inconsistent ride services to residents and workers outside the core service area of Manhattan, raising equity and public safety concerns in these communities.

- **FHVs**: FHVs, also licensed by the TLC, include black cars, liveries, and limousines that provide pre-arranged service. FHVs cannot accept street hails and must operate through a dispatching base. Rides are typically pre-arranged through a smartphone app, website, or phone reservation (by individuals or, often, through contracts held by businesses). Customers can ride individually or set up shared rides with other customers making a similar trip. FHVs must be licensed by the TLC and can operate throughout New York City. FHV drivers either independently own or lease their own personal vehicles or lease a vehicle from a fleet. Some FHVs are licensed as "high-volume" FHVs, because they operate from bases that dispatch more than 10,000 trips a day. Lyft and Uber are examples of high-volume FHVs.[37]

According to the TLC's 2020 Fact Book, in 2019 there were 13,587 yellow cabs, 2,895 green cabs, and 101,663 FHVs licensed by the TLC.[38] In 2019 the TLC licenses more than 118,000 vehicles and nearly 185,000 drivers in total. In April 2022, there were 7,053 yellow cabs, 1,027 green cabs, and 70,281 FHVs that made at least one trip. As detailed in **Chapter 17, "Environmental Justice,"** approximately 96 percent of yellow and green cab drivers and 91 percent of FHV drivers were born in countries other than the United States. Before the COVID-19 pandemic, the number of licensed yellow cabs was steady between 2015 and 2019, limited by the number of total medallions available from the TLC. In contrast, the number of licensed green cabs decreased by 62 percent between 2015 and 2019 as the emerging FHV technology gained popularity and the number of licensed FHVs increased by over 50 percent between 2015 and 2019.[39]

The TLC provides data for both licensed vehicles and drivers (those that are currently in good standing with TLC's licensing division) and active vehicles and drivers (those that provided at least one trip in a given time period). The number of active vehicles differs from the number of licensed vehicles, because not every licensed vehicle is actively in use during a given time period. In 2018, during peak activity periods, as many as 12,610 active yellow cabs, 4,026 green cabs, and 90,284 active FHVs were providing trips in New York City.[40] **Figure 6-7** illustrates the average number of active vehicles per month between 2015 and 2019 (distinguishing FHVs by traditional livery cars/black cars and high-volume FHVs available through ride hailing apps). As shown in the figure, there were reductions in the number of active livery cars, yellow cabs, and green cabs beginning in 2015 as the popularity of high-volume FHV ride hailing services grew. Between January 2016 and January 2019, the numbers of active yellow cabs, green cabs, and traditional livery/black cars decreased by 11.1 percent, 45.0 percent, and 55.4 percent, respectively.

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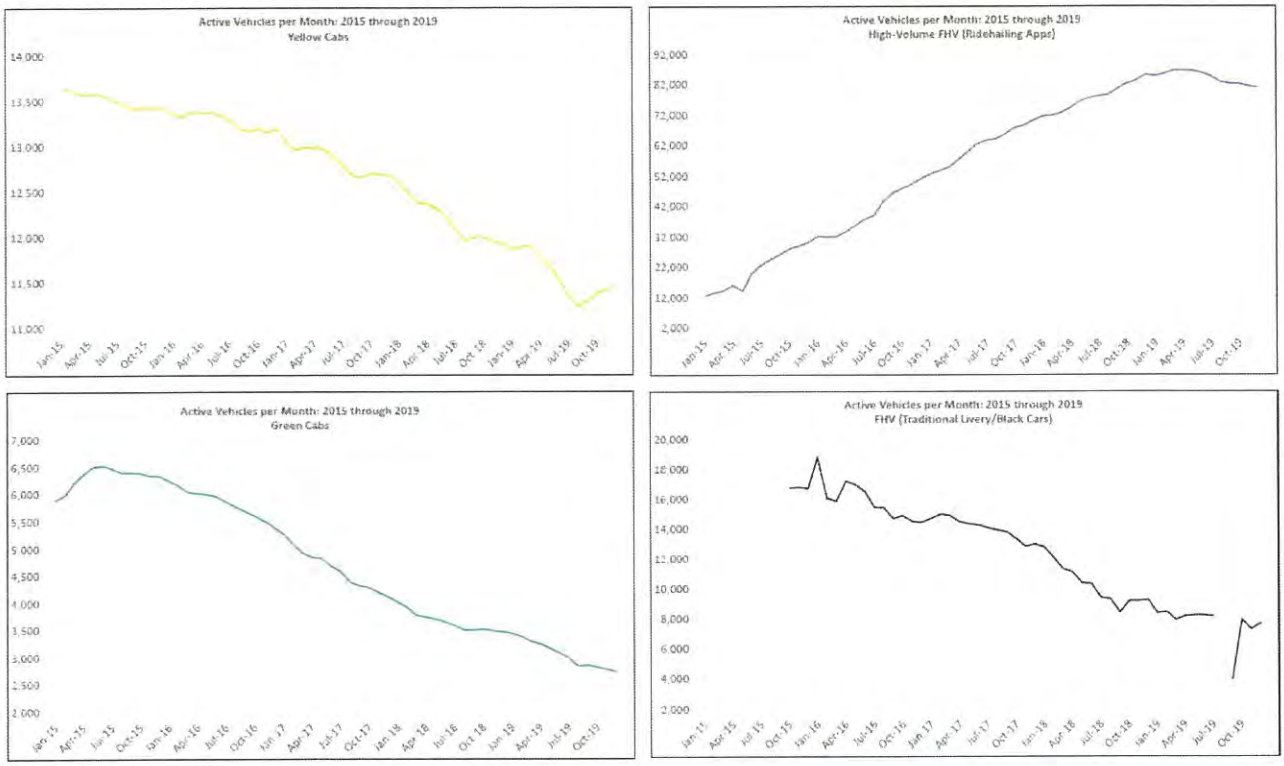
37 New York City TLC. 2020 Fact Book. https://www1.nyc.gov/assets/tlc/downloads/pdf/2020-tlc-factbook.pdf.

38 The New York City TLC's 2020 Fact Book defines paratransit vehicles as vehicles that provide pre-arranged service for medical-related purposes. Trips are usually to or from healthcare facilities and vehicles must be dispatched by a paratransit base. These do not include ADA-accessible yellow cabs.

39 New York City TLC. 2020 Fact Book and 2016 Fact Book. https://www1.nyc.gov/assets/tlc/downloads/pdf/2020-tlc-factbook.pdf.

40 The New York City TLC's 2018 Fact Book presents an annual number for licensed yellow cab, green cab, and FHVs, while data on the number of active vehicles is reported on a monthly basis. In the case of green cabs, the highest monthly statistic for active vehicles (4,026 in January 2018) was greater than the number of reported average annual licensed vehicles (3,579 vehicles in 2018); this is likely due to a downward trend in licensed green cab vehicles over 2018. For this reason, the numbers of licensed and active vehicles should not be used to estimate the percentage of licensed vehicles that are active. This level of data is not provided in the 2020 Fact Book.

Figure 6-7. Active Taxi and For-Hire Vehicles per Month (2015 through 2019)



Source: NYC Taxi & Limousine Commission's Monthly Indicators and FHV Base Aggregate reports. https://toddwschneider.com/dashboards/nyc-taxi-ridehailing-uber-lyft-data/.

A key contributor to rising congestion in the pre-COVID-19 pandemic period was the explosive growth of high-volume (application-based) FHVs. While the number of yellow taxicabs is capped at 13,587 vehicles, prior to 2018, there was no cap on the number of FHVs.[41] Between 2010 and 2019, companies such as Uber and Lyft dramatically expanded their operations, and the number of registered FHVs, licensed drivers, and trips doubled.[42] By fall 2019, there were more than 100,000 FHVs on the road, and taxis and FHVs made up 48 percent of all vehicles circulating in the Manhattan CBD.[43] The business model of the taxi and FHV industries requires drivers to cruise without passengers, increasing vehicle-miles traveled (VMT) in the Manhattan CBD. A large proportion of VMT for both taxi and high-volume FHVs is associated with cruising without passengers. In the fourth quarter of 2019 (prior to the COVID-19 pandemic), approximately 45 percent of yellow cabs' VMT within the Manhattan CBD were associated with cruising, while approximately 30 percent of high-volume FHVs' VMT within the Manhattan CBD were associated with cruising (including empty travel to a ride hail's pickup location).[44] Frequent double-parking by these vehicles further contributes to congestion.

TLC-licensed vehicles completed more than 1,000,000 trips per day on average by the end of 2019.[45] Most trips in yellow cabs originate in Manhattan (97 percent), while other TLC-based services distribute trips more evenly across the boroughs. In terms of distances traveled, the average yellow cab trip in 2018 was 3.7 miles and the average green cab trip was 2.8 miles, although more than one-half of all yellow cab and green cab trips were less than two miles.[46] The average fare for a yellow cab trip was $13.61 and the average fare for a green cab trip was $12.78.[47] Average distance and fare for FHV trips was not available. Drivers must use an E-ZPass when taking a toll bridge or tunnel. For a yellow or green cab, the discounted E-ZPass toll is added to the passenger fare at the end of the trip. For an FHV, the toll is part of the estimated trip cost included in the reservation for the FHV or the adjusted charge at the end of the trip. Passengers must also pay the tolls to and from a destination for the following trips: Westchester and Nassau Counties; trips over the Cross Bay Veterans and Marine Parkway-Gil Hodges Memorial Bridges; and Newark Airport.[48]

The pandemic resulted in dramatic reductions in demand for taxi and FHV services. Historically concentrated in the Manhattan CBD and airports, citywide demand for yellow taxi services fell to near zero in spring 2020 and only recovered to 25 percent of pre-pandemic levels by the fall peak of 2020 (**Figure 6-8**). High-volume FHV services, including Uber and Lyft, also dropped substantially but recovered more quickly,

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41 New York City TLC.

42 New York City TLC 2020 TLC Factbook.

43 NYCDOT analysis.

44 *Ibid.*

45 In addition to taxis and FHVs, this includes trips made by 792 TLC-licensed commuter vans and 161 TLC-licensed paratransit vehicles.

46 According to the New York City TLC's 2018 Fact Book, 92.2 percent of yellow cab trips occur entirely within Manhattan, while 5.1 percent of yellow cab trips are to and from New York City airports. While yellow cab trips to airports constitute a small percentage of overall trips, the length of those trips contributes to the higher average yellow cab trip distance relative to the median trip distance. Unlike yellow cabs, green cabs may not pick up passengers from New York City airports unless trips are pre-arranged through a base. Therefore, most green cabs are used within the boroughs, excluding Staten Island.

47 This 2018 data does not account for the New York State Congestion Surcharge, which went into effect January 2019 ($2.75 for each for-hire vehicle transportation trip in a non-yellow cab or pool vehicle, $2.50 per trip by yellow cab, and $0.75 per pool trip; fares apply to all trips that begin, end, or pass through Manhattan south of 96th Street).

48 NYC Taxi & Limousine Commission. https://www1.nyc.gov/site/tlc/passengers/taxi-fare.page#.

with business at approximately two-thirds of pre-COVID-19 levels by the fall of 2020. Recovery of citywide trip levels continued in 2021, with fall trip levels at 46 percent and 83 percent for yellow taxi and high-volume FHV services, respectively, compared to the fall peak of 2019. In terms of citywide VMT, yellow taxis mileage accumulation in fall 2021 was approximately half of that in fall 2019, while high-volume FHV VMT mileage was three-quarters. Prior to the pandemic, taxi and FHV VMT in the Manhattan CBD represented approximately 15 percent to 20 percent of taxi and FHV VMT citywide. That fell to below 10 percent during the height of the pandemic and has since risen to approximately 15 percent. Yellow cab VMT in the Manhattan CBD represented about 35 percent to 40 percent of yellow cab VMT citywide pre-pandemic, falling to below 20 percent during the height of the pandemic, and has since risen to 30 percent. High-volume FHV VMT in the Manhattan CBD represented about 15 percent of high-volume VMT citywide pre-pandemic, falling to about 8 percent during the height of the pandemic, and has since risen to just under 15 percent.[49]

The number of TLC-licensed drivers actively performing trips reached a peak in October 2021 but was still just 69 percent of the number in October 2019 and was still recovering from significant loss of ridership due to the Omicron variant at the start of 2022. Many medallion owners stored their medallions with the NYC TLC rather than continue to pay fees for their use, and FHV drivers allowed their licenses to lapse in greater numbers. As of early 2022, the taxi industry remained dependent on the Manhattan core, with 75 percent of taxi trips starting or ending in the Manhattan CBD. By comparison, the FHV industry operated more widely in New York City, with 38 percent of high-volume FHV trips starting or ending in the Manhattan CBD[50].

Paratransit Vehicles

Paratransit is the term used for a "demand-response" service in which an eligible customer reserves a trip in advance to a destination within the service area covered by public buses and subways. The Americans with Disabilities Act (ADA) requires the provision of paratransit for individuals with disabilities who are unable to use accessible mass transit for some or all of their trips. In New York City, paratransit vehicles provide wheelchair-accessible rides through the Access-A-Ride program administered by MTA. The Access-A-Ride program provides shared-ride, door-to-door trips for New Yorkers utilizing various vehicle types. According to the TLC's 2020 Fact Book, in 2019 there were 161 paratransit vehicles licensed by the TLC.[51] The most commonly recognized blue and white vans are not licensed by the TLC, but TLC-licensed vehicles also provide trips for the Access-A-Ride program. As of May 2018, Access-A-Ride trips by TLC-licensed vehicles accounted for about one-half of all Access-A-Ride trips, and the share has been growing considerably since this option was first available in October 2016. As of 2019, the number of monthly Access-A-Ride trips in TLC-licensed vehicles exceeded 250,000.

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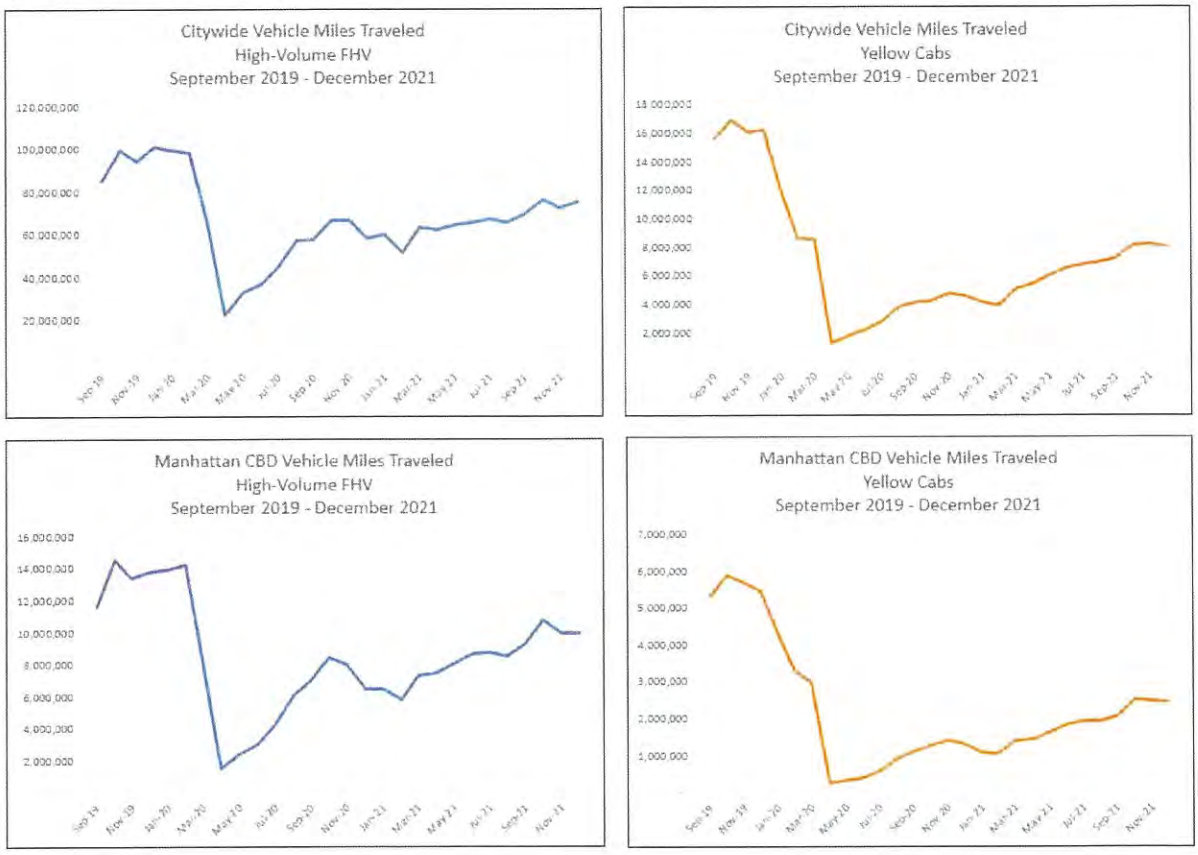
49 NYCDOT.

50 New York City TLC.

51 The New York City TLC's 2020 Fact Book defines paratransit vehicles as vehicles that provide pre-arranged service for medical-related purposes. Trips are usually to or from healthcare facilities and vehicles must be dispatched by a paratransit base. These do not include ADA-accessible yellow cabs.

Figure 6-8. High-Volume For-Hire Vehicle and Yellow Cab Vehicle Miles Traveled (September 2019 through December 2021)



Source: NYCDOT.

Buses

The following section describes the wide variety of bus types, organized by the type of service provided:

- **Public transit:** Public transit buses include New York City Transit/Manhattan and Bronx Surface Transit Operating Authority and MTA Bus Company buses that are subsidized services carrying primarily New York City residents and operated by a public agency; other non-subsidized franchise buses carrying primarily New York City residents operated by private companies; subsidized buses operated by a public agency servicing primarily New York State and New Jersey residents (e.g., NJ Transit Corporation, Bee Line); and subsidized private buses that carry primarily suburban (New York State and New Jersey) residents (e.g., Academy, Rockland Coach).
- **Public transportation (commuter vans):** New York's commuter vans—also known as shuttle buses, minibuses, dollar vans, or jitneys—carry approximately 120,000 passengers each day.[52] Most commuter vans provide service in areas that are less well-served by subway service or other public transportation options. Some commuter vans, such as the Chinatown-Flushing-Sunset Park commuter van, operate under privately owned Commuter Van Authorities licensed by the TLC to provide rides, though they do not operate on published schedules or routes. The commuter van drivers operate motor vehicles with seating capacity of 9 to 20 passengers. According to the TLC's 2020 Fact Book, in 2019 there were 792 commuter vans licensed by the TLC.[53] In addition, privately operated jitney buses provide transportation between New Jersey and Midtown Manhattan. The New Jersey jitneys provide a reliable, low-cost transit option to communities where conventional, direct public bus service is limited or unavailable. Jitneys that travel interstate are under the purview of the Federal government, are not licensed by the TLC, and pay tolls at the Port Authority of New York and New Jersey crossings.
- **Private use:** Private use buses include sightseeing buses operated by private companies to provide hop-on, hop-off tourist services within New York City as a for-profit enterprise, as well as charter buses operated by private companies to provide charter services as a for-profit enterprise.
- **Privately operated longer-haul public transportation:** These include buses operated by private companies (e.g., Greyhound) that provide long-distance, scheduled intercity services into and out of New York City as a for-profit enterprise, generally without public subsidy.
- **Access to education:** School buses provide subsidized bus service carrying students to both public and private schools located in the region.
- **Various other uses:** Other buses not identified above include those used by religious institutions, the New York City Department of Corrections, the NYPD, and TBTA.

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52 King, D.A.; E. Goldwyn. September 2014. "Why do regulated jitney services often fail? Evidence from the New York City group ride vehicle project." *Transportation Policy 2014*, 35, 186 to 192.

53 The New York City TLC's 2020 Fact Book defines paratransit vehicles as vehicles that provide pre-arranged service for medical-related purposes. Trips are usually to or from healthcare facilities and vehicles must be dispatched by a paratransit base. These do not include ADA-accessible yellow cabs.

Movement of Goods and Services, including Freight Transport

Every day, trucks and commercial vehicles deliver goods to millions of New York City residents and workers. Of the approximately 365 million tons of cargo that enter, leave, or pass through New York City each year, approximately 89 percent is carried by truck.[54] Trucks also deliver goods to homes or stores within New York City, commonly known as "last-mile" distribution. Trucks comprise a small but meaningful portion of the overall traffic stream in New York City, ranging from 8 percent to 12 percent of all traffic. Approximately 125,600 trucks cross into Manhattan per day, and approximately 73,600 trucks cross into Brooklyn each day from all points of access. Within Midtown Manhattan (in the Manhattan CBD), 80 percent of the commercial activity conducted by trucks occurs during daylight hours between 7:00 a.m. and 7:00 p.m. Congestion within Midtown impedes truck mobility during the day, with truck speeds dropping to 7 miles per hour, which is 50 percent slower than off-peak periods (between 7:00 p.m. and 7:00 a.m.).[55]

Though not always adhered to, truck traffic in New York City is required to use designated truck routes, which include local truck routes and through truck routes. Local truck routes are for use by trucks traveling to or from their origin and destination within a borough. Through truck routes consist of major urban arterials and highways and serve trucks along their journeys that have neither an origin nor destination within the borough.

Industry research on the trucking industry shows that in 2020, tolls were approximately 3 percent of motor carriers' average marginal cost per mile in the Northeast U.S. ($0.055 per mile, with a total average marginal cost of $1.835 per mile). The area covered by this research includes the 28-county regional study area for this EA, although toll costs for localized trip-making in and out of the Manhattan CBD could be higher than the regional average based on the density of tolled roadways and bridges. [56] From 2015 to 2020, the average marginal cost per mile of tolls across the trucking industry nationally increased by approximately 85 percent.[57] Many drivers and motor carriers plan their routes to avoid or minimize tolls, because tolls are typically considered a fixed cost that is not added directly to customer shipping invoices, and carriers or drivers absorb the cost of the toll expense.[58] Economic

Types of Costs

- Marginal costs: Costs associated with producing an additional unit of output (i.e., an additional mile of travel)
- Fixed costs: Costs that are constant and occur regularly (such as rent and salaries)
- Variable costs: Costs that change with the level of production, such as purchase of raw materials

54 New York City Department of Transportation. April 2019. *Improving the Efficiency of Truck Deliveries in NYC.* https://www1.nyc.gov/html/dot/downloads/pdf/truck-deliveries-ll189.pdf.

55 Ibid.

56 American Transportation Research Institute. *An Analysis of the Operational Costs of Trucking: 2021 Update.* November 2021. https://truckingresearch.org/wp-content/uploads/2021/11/ATRI-Operational-Cost-of-Trucking-2021-FINAL.pdf. Motor carrier marginal costs include vehicle-based costs (fuel, truck/trailer lease or purchase payments, repair and maintenance, truck insurance premiums, permits and licenses, tires, and tolls) and driver-based costs (driver wages and benefits). The marginal cost of tolls in the Northeast U.S. is heavily influenced by long-haul trucking costs and is not reflective of cost associated with "last-mile" distribution to and within the Manhattan CBD, for which tolls could comprise a higher percentage of cost depending upon the routes, time, and distance traveled.

57 Ibid. This statistic includes the cost of all tolling, accounting for both new tolls and toll increases.

58 Hooper, Alan, and Dan Murray. 2018. *An Analysis of the Operational Costs of Trucking: 2018 Update.* American Transportation Research Institute. https://truckingresearch.org/wp-content/uploads/2018/10/ATRI-Operational-Costs-of-Trucking-2018.pdf.

research on urban freight delivery in the region finds that it is a highly competitive market with delivery rates equal to marginal costs. Since toll costs are a fixed cost—as they do not depend on a singular unit of production (i.e., delivery to an individual receiver)—the toll cost cannot be passed along to most receivers. The exceptions are certain market segments—including carriers of stone/concrete, wood/lumber, food, electronics, and beverages—with market power such that they could pass along toll costs.[59] Despite these research findings, it is recognized that shippers will pass the cost along to receivers if the competitive market will support doing so, and therefore tolls costs may be passed along to receivers more broadly than suggested by this research. To the extent toll costs are passed along to receivers, those costs are diluted among the various receivers on a journey (within New York City, averaging 5.5 stops per journey[60]). Those receivers in turn pass incremental costs along to customers, with the cost further diluted across the inventory of shipped goods.

Examples of Truck Toll Costs

- A 2-axle box truck shipping bananas from the Hunts Point Market to the Manhattan CBD: The truck would pay a toll for the RFK Bridge crossing into Manhattan (ranging from $11.84 to $20.35) or use the Willis Avenue Bridge to avoid a toll.
- A 3-axle truck shipping retail goods from a fulfillment center on Staten Island to Manhattan CBD: The truck would pay a toll for the Verrazzano-Narrows Bridge (ranging from $19.40 to $33.51) to cross into Brooklyn, travel along the Belt Parkway (I-287), and then pay a toll to enter Manhattan through the Hugh L. Carey Tunnel (also ranging from $19.40 to $33.51) or use one of the untolled East River bridges to avoid a toll.

In the region, trucks must pay tolls on a number of facilities.[61] Toll rates vary, depending on which crossing is used, the direction of travel, time of day, the number of axles on the truck, and whether the toll is paid by E-ZPass, cash, or Tolls by Mail.[62] **Appendix 6B, "Economic Conditions: Existing Truck Toll Rates,"** presents *[2022]* truck toll rates at crossings in and near New York City. The cost of tolls associated with deliveries varies widely depending on the route, truck type, availability of E-ZPass, and the time and frequency of toll crossings. As shown in **Appendix 6B**, truck rates for individual Hudson River crossings near Manhattan range from $30 to $132, depending on the size of the vehicle, time of day, and availability of E-ZPass. Similarly, toll costs as a percentage of total delivery cost vary widely depending upon the routes, times, and distances traveled.[63] Delivery companies typically incorporate

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59 Holguin-Veras, Jose, et al. September 2010. *Integrative Freight Demand Management in the New York City Metropolitan Area*. http://www.nyc.gov/html/dot/downloads/pdf/ohd-final-report.pdf.

60 Ibid.

61 Trucks must pay tolls at six bridges and two tunnels connecting the New York City boroughs (Bronx-Whitestone, Throgs Neck, Robert F. Kennedy, Verrazzano-Narrows, Cross Bay, and Marine Parkway Bridges; Hugh L. Carey and Queens-Midtown Tunnels); two tunnels and four bridges connecting New York City and New Jersey (Lincoln and Holland Tunnels, and George Washington, Bayonne, Goethals, and Outerbridge Crossing Bridges); and on several roadways and bridges outside New York City, including the New Jersey Turnpike (I-95), the Garden State Parkway south of Exit 105, the New York State Thruway (I-87), the Connecticut Turnpike (I-95), the Mario M. Cuomo Bridge (I-287), the Newburgh-Beacon Bridge (I-84), the Bear Mountain Bridge, the Mid-Hudson Bridge, and the Kingston-Rhinecliff Bridge.

62 Specific New York State Thruway toll rates can be identified using the toll calculator at https://wwwapps.thruway.ny.gov/tollcalculator/permit.aspx.
Port Authority of New York and New Jersey toll rates are at https://www.panynj.gov/bridges-tunnels/en/tolls.html.
TBTA toll rates are at https://new.mta.info/fares-and-tolls/bridges-and-tunnels/tolls-by-vehicles.

63 Pre-pandemic shipping data suggests that an average cost of a journey for a large truck between Maspeth, Queens and Manhattan (inclusive of tolls and driver and vehicle costs) was approximately $700 per journey, based on Chainalytics Inc. transportation service price benchmarking data purchased under the USDOT Freight Fluidity Program.

the toll costs into their overall delivery costs rather than add a special surcharge or line item for tolls.

6.3.3 Environmental Consequences

This section describes the effects of the No Action Alternative and CBD Tolling Alternative on forecasted economic conditions in the region by the 2023 analysis year, using results of the BPM. While the U.S. Census Bureau-based data sources are part of the development of the BPM, U.S. Census Bureau-based data is not directly comparable to the results of the BPM runs for the 2023 No Action Alternative so this chapter does not present a comparison of existing conditions to No Action Alternative conditions.[64] Like all transportation-related analyses, this section assesses incremental change between the 2023 No Action Alternative and the CBD Tolling Alternative and therefore largely relies on the results of the BPM.

6.3.3.1 No Action Alternative

Under the No Action Alternative, a vehicular tolling program to reduce traffic congestion in the Manhattan CBD would not be implemented. The movement of workers, goods and services, and consumers into, out of, and through the Manhattan CBD influence economic conditions at the regional level. The following sections address each of these influences for the No Action Alternative.

Movement of Workforce

The Project Sponsors conducted transportation modeling for the Project using the BPM originally developed by the New York Metropolitan Transportation Council, as described in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling."** The BPM uses census data and other economic forecasts to establish forecasts of travel characteristics. Therefore, the BPM results affirm the mode choice and travel patterns developed and described previously through census data but are not directly comparable to census data. The BPM baseline was used to model the incremental changes resulting from the CBD Tolling Alternative. The BPM results show that in the No Action Alternative, of the approximately 1.56 million workers who would commute into or within the Manhattan CBD, close to 80 percent (about 1.22 million workers) would use public transportation as their primary mode of transportation to work (**Table 6-16**). Approximately 17 percent of workers would commute into or within the Manhattan CBD by auto (including drive alone, carpool, or taxi/FHV). Under the No Action Alternative, nearly 5 percent of workers are estimated to commute by walking or biking.

[64] The BPM uses census data and other economic forecasts to establish forecasts of travel characteristics. Therefore, the BPM results affirm the mode choice and travel patterns developed and described previously through census data but are not directly comparable to census data.

Table 6-16. Regional Workforce Commuting To and Within the Manhattan CBD: No Action Alternative

GEOGRAPHIC AREA OF ORIGIN	COMMUTE BY PUBLIC TRANSPORTATION	COMMUTE BY AUTO (Including Taxi/FHV)	COMMUTE BY WAL /BI E[1]	PERCENTAGE OF WOR ERS COMMUTING BY AUTO
New York City	765,424	173,374	69,671	17.2
Bronx County	78,107	19,411	0	19.9%
Kings County (Brooklyn)	231,152	50,789	498	18.0%
New York County (Manhattan)	232,162	39,672	68,856	11.6%
Inside Manhattan CBD	94,328	14,748	55,738	8.9%
Outside Manhattan CBD	137,834	24,924	13,118	14.2%
Queens County	202,032	58,095	317	22.3%
Richmond County (Staten Island)	21,971	5,407	0	19.7%
Long Island Counties[2]	112,408	16,394	0	12.7
New York Counties North of New York City[3]	74,409	27,336	0	26.9
New Jersey Counties[4]	222,044	42,368	0	16.0
Connecticut Counties[5]	46,932	10,707	0	18.6
TOTAL	1,221,217	270,179	69,671	17.3

Source: BPM, WSP 2021.

1 When the BPM was developed in 2005, insufficient data was available to reliably estimate bike journeys; based on 2012–2016 CTPP data, the BPM results tend to underreport walk/bike journeys.

2. Long Island counties include Nassau and Suffolk.

3. New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4. New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

5. Connecticut counties include Fairfield and New Haven.

New York City's five boroughs would continue to provide the largest absolute numbers of commuters into the Manhattan CBD (1.01 million workers, including those residing within the Manhattan CBD), with the largest percentage of those commuters traveling from Manhattan and Brooklyn. The workforce within New York City would have a lower rate of auto commuting to the Manhattan CBD (about 17 percent) as compared to New York counties north of New York City (27 percent) and Connecticut counties (19 percent), a slightly higher auto-commuting rate from New Jersey (16 percent), and a higher rate than Long Island (13 percent). The lowest rate of auto commuting would be from Manhattan CBD residents who work within the Manhattan CBD (9 percent), with over one-third of these workers walking or biking to work.

Table 6-17 presents BPM projections for the primary mode of transportation of regional workforce participants who commute from within the Manhattan CBD to regional destinations outside the Manhattan CBD. In the No Action Alternative, of the projected 37,457 workers who commute from within to outside of the Manhattan CBD, approximately 64 percent (23,881 workers) would use public transportation as their primary mode of transportation to work. Approximately 33 percent of workers would commute from the Manhattan CBD to non-CBD destinations by auto (including taxi/FHV), and about 3 percent of workers would commute by other modes (e.g., walk or bicycle).

Table 6-17. Regional Workforce Commuting from Within the Manhattan CBD to Regional Destinations Outside the Manhattan CBD: No Action Alternative

GEOGRAPHIC AREA OF DESTINATION	COMMUTE BY PUBLIC TRANSPORTATION	COMMUTE BY AUTO (Including Taxi/FHV)	COMMUTE BY WAL /BI E[1]	PERCENTAGE OF WOR ERS COMMUTING BY AUTO
New York City	18,991	3,010	1,041	13.1
Bronx County	693	316	0	31.3%
Kings County (Brooklyn)	3,820	1,161	388	21.6%
New York County (Manhattan) outside Manhattan CBD	13,563	1,238	638	8.0%
Queens County	905	285	15	23.7%
Richmond County (Staten Island)	10	10	0	50.0%
Long Island Counties[2]	1,057	1,694	0	61.6
New York Counties North of New York City[3]	134	431	0	76.3
New Jersey Counties[4]	3,054	6,702	0	68.7
Connecticut Counties[5]	645	698	0	52.0
TOTAL	23,881	12,535	1,041	33.5

Source: BPM, WSP 2021.

1 When the BPM was developed in 2005 there was insufficient data available to reliably estimate bike journeys; based on 2012–2016 CTPP data the BPM results tend to underreport walk/bike journeys.

2 Long Island counties include Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

5 Connecticut counties include Fairfield and New Haven.

Of workers who live in, but work outside, the Manhattan CBD approximately 41 percent (an estimated 15,439 workers) would work at locations elsewhere in Manhattan; of those commuters, approximately 8 percent (1,238 workers) would commute to their jobs by personal auto or taxi/FHV. The next-largest destinations for residents of the Manhattan CBD who work elsewhere would be New Jersey counties (9,756 workers), followed by Brooklyn (5,369 workers) and Long Island (2,751 workers). Counties north of New York City would see the largest percentage of Manhattan CBD residents who work elsewhere and use personal auto or taxi/FHV as the primary means of travel, at approximately 76 percent (431 of 565 workers), followed by New Jersey counties, at 69 percent (6,702 of 9,756 workers).

Regional Non-Work-Related Journeys To, From, and Within the Manhattan CBD

Table 6-18 presents the projected numbers of regional non-work journeys to and within the Manhattan CBD under the No Action Alternative. These include journeys for activities such as health care visits, retail and grocery purchases, dining, and entertainment. Overall, approximately 14 percent of such journeys would be made by auto, which would be a lower rate than work journeys to the Manhattan CBD (17 percent) and substantially less in terms of the overall volume (117,950 non-work journeys by auto, as compared to 270,179 drive journeys for work). The highest rates of auto-based, non-work journeys would originate in New York counties north of New York City (approximately 48 percent). Connecticut counties and Long Island also have relatively high rates of auto-based journeys (approximately 42 and 38 percent, respectively), followed by New Jersey counties with 22 percent of non-work journeys by auto. However, the auto-based, non-work journeys to the Manhattan CBD originating from outside of New York City would

represent only about 5 percent of the total auto-based journeys to the Manhattan CBD from the regional study area; New York City residents would contribute the remaining 95 percent. Approximately 86 percent of the region's non-work journeys made by public transportation into and within the Manhattan CBD would originate within New York City.

Table 6-18. Daily Regional Non-Work-Related Journeys To and Within the Manhattan CBD: No Action Alternative

GEOGRAPHIC AREA OF ORIGIN	JOURNEYS BY ALL MODES	JOURNEYS BY AUTO (Including Taxi/FHV)	PERCENTAGE OF JOURNEYS BY AUTO
New York City	796,263	97,212	12.2
Bronx County	41,511	9,427	22.7%
Kings County (Brooklyn)	80,405	17,327	21.5%
New York County (Manhattan)	601,900	53,265	8.8%
Inside Manhattan CBD[1]	513,511	35,250	6.9%
Outside Manhattan CBD	88,389	18,015	20.4%
Queens County	61,828	14,972	24.2%
Richmond County (Staten Island)	10,619	2,221	20.9%
Long Island Counties[2]	16,566	6,300	38.0
New York Counties North of New York City[3]	7,640	3,680	48.2
New Jersey Counties[4]	46,807	10,121	21.6
Connecticut Counties[5]	1,514	637	42.1
TOTAL	868,790	117,950	13.6

Source: BPM, WSP 2021.

1 Journeys originating in the Manhattan CBD are internal journeys within the Manhattan CBD.

2 Long Island counties includes Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 Connecticut counties include Fairfield and New Haven.

5 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

Table 6-19 presents the projected numbers of non-work journeys originating within the Manhattan CBD and destined for non-CBD locations. Overall, under the No Action Alternative approximately 11 percent of such journeys would be made by auto, which would be a lower rate than work journeys from the Manhattan CBD (34 percent) but a substantially higher overall volume (70,630 non-work journeys by auto, as compared to 12,535 drive journeys for work). The highest rates of auto-based, non-work journeys would be destined for Long Island (95 percent) and Connecticut counties (94 percent), followed by New York counties north of New York City with 89 percent of all non-work journeys to those counties from the Manhattan CBD arriving by auto. However, the auto-based, non-work journeys from the Manhattan CBD destined for regional locations outside New York City would represent about 14 percent of the total auto-based journeys from the Manhattan CBD; New York City destinations would contribute the remaining 86 percent. With respect to public transportation, about 99 percent of those journeys would be destined for locations within New York City.

Table 6-19. Daily Non-Work-Related Journeys From the Manhattan CBD: No Action Alternative

GEOGRAPHIC AREA OF DESTINATION	JOURNEYS BY PUBLIC TRANSPORTATION	JOURNEYS BY AUTO (Including Taxi/FHV)	JOURNEYS BY WAL /BI E[1]	PERCENTAGE OF JOURNEYS BY AUTO
New York City	182,684	60,848	411,230	9.3
Bronx County	2,903	5,262	0	64.4%
Kings County (Brooklyn)	7,663	8,620	4,203	42.1%
New York County (Manhattan)	169,103	43,472	406,551	7.0%
Inside Manhattan CBD	126,589	35,250	383,588	6.5%
Outside Manhattan CBD	42,514	8,222	22,963	11.2%
Queens County	3,001	3,481	476	50.0%
Richmond County (Staten Island)	14	13	0	48.1%
Long Island Counties[2]	241	4,194	0	94.6
New York Counties North of New York City[3]	281	2,245	0	88.9
New Jersey Counties[4]	976	3,231	0	76.8
Connecticut Counties[5]	7	112	0	94.1
TOTAL	184,189	70,630	411,230	10.6

Source: BPM, WSP 2021.

1 When the BPM was developed in 2005 there was insufficient data available to reliably estimate bike journeys; based on 2012–2016 CTPP data the BPM results tend to underreport walk/bike journeys.

2 Long Island counties includes Nassau and Suffolk.

3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

4 Connecticut counties include Fairfield and New Haven.

5 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

Taxi and For-Hire Vehicle Industry

Table 6-20 presents projections of daily VMT by taxi/FHV within the region under the No Action Alternative.[65] In total, taxis/FHVs would travel approximately 4.3 million VMT on a daily basis. Over one-half (approximately 58 percent) of all taxi/FHV VMT would occur within New York City, with nearly one-half (approximately 43 percent) of those VMT occurring within Queens, and approximately 29 percent of New York City VMT occurring within Manhattan. Outside New York City, New Jersey counties would have the highest VMT for the region (approximately 1.2 million VMT daily).

65 Taxis and FHVs are a single mode in the BPM and therefore cannot be presented separately.

Table 6-20. Daily Vehicle-Miles Traveled for Taxis/For-Hire Vehicles in the Regional Study Area: No Action Alternative

GEOGRAPHIC AREA	VEHICLE-MILES TRAVELED[1]
New York City	2,503,176
Bronx County	272,450
Kings County (Brooklyn)	373,255
New York County (Manhattan)	715,505
Inside Manhattan CBD	323,998
Outside Manhattan CBD	391,507
Queens County	1,085,040
Richmond County (Staten Island)	56,926
Long Island Counties[2]	291,624
New York Counties North of New York City[3]	222,684
New Jersey Counties[4]	1,181,690
Connecticut Counties[5]	116,356
TOTAL	4,315,530

Source: BPM, WSP 2021.
Note: Numbers may not total due to rounding.
1 Projections include vehicle-miles-traveled only during fares and do not include cruising without passenger(s).
2 Long Island counties includes Nassau and Suffolk.
3 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
4 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
5 Connecticut counties include Fairfield and New Haven.

Movement of Goods and Services, Including Freight Transport

Table 6-21 presents the projected daily vehicle trips within and to the Manhattan CBD in the No Action Alternative for different types of commercial vehicles (trucks). It is important to note that total number of daily trips for vehicle types associated with the movement of goods and services should not be confused with a total number of individual vehicles. Rather, it represents vehicles that will make a series or chain of trips within the Manhattan CBD boundary to fulfill deliveries or other services. Each trip identified in **Table 6-21** represents a modeled estimate of each individual leg of the multiple-stop trip. The 18,965 medium truck trips and 6,043 heavy truck trips to the Manhattan CBD shown in the table also include multiple crossings to and from the Manhattan CBD over the course of a day. An example would be the U.S. Postal Service, where delivery vehicles leave the main distribution center and make a series of stops (each one considered an individual trip in **Table 6-21**) throughout the day.

Table 6-21. Daily Vehicle Trips Within and To the Manhattan CBD by Type: No Action Alternative

VEHICLE TYPE	DAILY VEHICLE TRIPS WITHIN MANHATTAN CBD	DAILY VEHICLE TRIPS CROSSING INTO MANHATTAN CBD
Commercial Van	122,098	23,203
Medium Truck	63,079	18,965
Heavy Truck	39,631	6,043
TOTAL	224,808	48,211

Source: BPM, WSP 2021.
Notes: Numbers may not total due to rounding.
Daily vehicle trips account for multiple stops by the same vehicle. Trips do not include through truck trips (i.e., truck trips passing through the Manhattan CBD without a stop in the Manhattan CBD.

6.3.3.2 CBD Tolling Alternative

This section describes the potential effects of the CBD Tolling Alternative on regional economic conditions, when compared with the No Action Alternative, beginning with a description of the potential regional economic benefits of the CBD Tolling Alternative. It then considers whether the projected changes in the flows of workers, goods and services, or consumers could alter regional market conditions in a manner that could jeopardize the viability of specific industries.

Potential Economic Benefits

A study conducted for Partnership for New York City found that traffic congestion in the New York metropolitan area has a $20 billion annual cost, including more than $9 billion in travel-time costs and nearly $6 billion in industry revenue losses. *[The study estimates the cost per commuter from congestion is nearly $1,900 annually for Manhattan Workers and $767 per worker for the New York City metropolitan region.[66] The Partnership for New York City's original 2006 research found that the level of traffic in New York City and much of the metropolitan region has crossed the dividing line that separates economically efficient traffic flow from destructive, excess congestion. As a result, virtually every business and industry sector in all five boroughs and across the metropolitan region is suffering losses because of congestion.[67]*

Congestion pricing benefits drivers and businesses by reducing delays and stress, by increasing the predictability of trip times, and by allowing for more deliveries per hour for businesses.[68] More reliable and productive workforce as well as improved ability to schedule and complete deliveries would have beneficial impacts on businesses in the Manhattan CBD.] Through congestion relief, the CBD Tolling Alternative would provide an economic benefit to the Manhattan CBD, and thus to the region and nation as a whole. As discussed earlier, the Manhattan CBD is a critical economic core of the region and a center of national and global economic activity. As the largest business district in the nation as well as the most visited city in the

66 The study defined the New York metropolitan area as including New York City, Westchester, Putnam, and Rockland Counties, and northern New Jersey. https://pfnyc.org/wp-content/uploads/2020/01/2018-01-Congestion-Pricing.pdf.

67 *[Partnership For New York City. Growth or Gridlock? The Economic Case for Traffic Relief and Transit Improvement for a Greater New York, December 2006. https://www.pfnyc.org/reports/GrowthGridlock_4pg.pdf.]*

68 *[U.S. Department of Transportation Federal Highway Administration, October 2008. Congestion Pricing: A Primer Overview. https://ops.fhwa.dot.gov/publications/fhwahop08039/fhwahop08039.pdf.]*

United States for business, cultural, and tourism travel, its transportation network is essential to supporting the high density that underpins New York City.

More specifically, transportation users in the region would benefit economically from the CBD Tolling Alternative through travel-time savings, improved or stabilized travel-time reliability, reduced vehicle operating costs, and improved safety that are described in **Chapter 5A, "Population Characteristics and Community Cohesion."** These changes would also positively affect productivity as described below:

- **Travel-Time Savings:** Travel-time savings associated with both work and non-work journeys are an economic benefit because they increase a person's productivity and overall utility by reducing time spent on less productive activities (i.e., traveling to a destination). Reduced congestion would facilitate the more efficient and cost-effective distribution of goods and services by truck and other deliveries in the Manhattan CBD. Part of the economic benefit realized by travel-time savings benefits would be offset by the increased transportation cost for those journeys under the CBD Tolling Alternative in the form of a toll. These benefits would occur in all tolling scenarios.
- **Vehicle Operating Cost Savings:** The CBD Tolling Alternative would decrease regional VMT relative to the No Action Alternative, which could lead to vehicle operating cost savings for drivers and businesses, which is an economic benefit.
- **Reliability Benefits:** When transportation systems are improved in terms of capacity or reliability, they can have an economic benefit such as increased opportunities and higher quality of life. Improving travel-time reliability also reduces logistics and scheduling costs beyond just the travel-time savings. Reliability of travel time refers to the level of travel-time uncertainty. When travel times are unpredictable, travelers typically allow more time for their journey to account for possible delays. By reducing congestion in the Manhattan CBD, the CBD Tolling

[ondon Congestion ricing

- Although the congestion charge in ondon was initially critici ed by different sta eholders and interest groups for its negative impact on economy a survey on a business group which accounted for 22 percent of ondon s G found that the ma ority over 0 percent of the members felt either no impact or positive impact on their business and only percent reported negative impact on their business

  itman T 200 ondon congestion pricing mplications for Other Cities found at https www vtpi org london pdf
- A 200 study found the level of acceptability toward ondon congestion charge increased from about 0 percent before the charge to more than 0 percent eight months after its introduction heng uduo iu hiyuan iu Chuanli hiwa oti ira an 20 nderstanding public response to a congestion charge A random effects ordered logit approach Transportation esearch art A n press ound at http www connectedandautonomoustransport com uploads 2 2 2 2 2 public acceptance to a congestion charge pdf
- eparate analyses indicated pricing in ondon has neutral regional economic impacts though annual surveys suggest businesses in the priced one have outperformed those outside n ingapore surveys suggested that the pricing did not change business conditions or location patterns Overall the business community responded positively to the program

  T Analytics nc August 200 essons earned from nternational E perience in Congestion ricing inal eport found at https ops fhwa dot gov publications fhwa hop0 0 intl cplessons pdf]

Alternative would reduce the current uncertainty associated with travel in the Manhattan CBD and potentially allow travelers to reduce the buffer time set aside for their journeys.

[Growing congestion and unreliability threatens truck transportation productivity and ultimately the ability of sellers to deliver products to market. Additionally, when deliveries cannot be relied on to arrive on time, businesses must keep extra "buffer stock" inventory on hand, which can be expensive. Pricing of the nation's major thoroughfares to guarantee free flow of traffic will ensure that reliability is restored to the transportation system, keeping business and transportation costs low. Lower costs will increase the competitiveness of U.S. businesses in international markets and boost the U.S. economy.[69]]

- **Safety Benefits:** Enhanced safety reduces medical costs and time spent injured/healing, both of which improve economic productivity.
- **Accessibility Benefits:** From an economic perspective, accessibility refers to the number of opportunities available for a given cost, either in terms of time or money. As the cost for movement between any two places changes, either in terms of time or money, accessibility changes. Accessibility can also be understood as the attractiveness of a place of origin (how easy it is to get from there to all other destinations) or of a destination (how easy it is to get to there from all other origins and destinations). For residents, accessibility includes access to employment, education, health care, and recreation. For businesses, it refers to access to labor, clients, support services, vendors, business partners, and deliveries. The CBD Tolling Alternative would improve accessibility for users throughout the region by decreasing congestion. In the long term, improved access to larger consumer markets and larger labor pools as well as more efficient access to resources could positively affect productivity, provide economies of scale, and lead to new economic growth. For some travelers, the introduction of a toll would decrease accessibility by disincentivizing an auto-based mode choice but given the small proportion of commuters who drive to work and the wide range of travel options other than driving available to the great majority of travelers, the effect of the CBD Tolling Alternative overall on accessibility would be positive.

Potential Adverse Economic Effects

At a regional level, the CBD Tolling Alternative would not substantively alter one or more of the underlying forces that shape real estate market conditions, and therefore would not be likely to result in the involuntary displacement of residents, businesses, or employees. (**Section 6.4** addresses the potential for indirect, or secondary, displacement at the neighborhood level.) While there would be potential social, economic, and environmental benefits from the CBD Tolling Alternative—some of which are discussed in the previous section—these factors would not be substantial enough to markedly influence residential or commercial rents within or outside of the Manhattan CBD. The study area and the Manhattan CBD have well-established residential and commercial markets that are heavily influenced by locational attributes (e.g., close proximity to job centers, cultural institutions and amenities, public transportation) that far

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[69] *[U.S. Department of Transportation Federal Highway Administration, October 2008. Congestion Pricing: A Primer Overview. https://ops.fhwa.dot.gov/publications/fhwahop08039/fhwahop08039.pdf.]*

outweigh the potential influence of quality-of-life benefits generated by the CBD Tolling Alternative. This section therefore focuses on potential changes in workforce and the operations of certain industries.

Movement of Workers

With the CBD Tolling Alternative, there would be an incremental cost to workers associated with commuting by auto if they enter or remain in the Manhattan CBD.[70] For these directly affected subsets of workers who would commute by auto—in total, approximately 19 percent of all workers commuting to or from the Manhattan CBD—the CBD Tolling Alternative would require one of the following decisions:

- **Continue to commute to work by auto and incur the toll cost.** The frequency and feasibility of this option for individuals would depend on several factors, such as the cost of the toll, their wages and salary, and the availability of non-vehicular commute options near their places of work and residence. As shown in **Table 6-22**, the BPM projects that there would be decreases in auto-commuting rates into, out of, and within the Manhattan CBD under the various tolling scenarios as compared to the No Action Alternative, but that many commuters would continue to travel by auto. The aggregate change in share of auto commuters into and within the Manhattan CBD would range from a decrease of 0.8 percentage points under Tolling Scenarios A and B (from 17.3 percent to 16.5 percent) to a 2.3 percentage point decrease under Tolling Scenario E (from 17.3 percent to 15.0 percent). Similarly, the aggregate change in share of auto commuters from within the Manhattan CBD to regional workplace locations outside the Manhattan CBD would range from a decrease of 0.8 percentage points under Tolling Scenario B (from 33.5 percent to 32.7 percent) to a 2.0 percentage point decrease under Tolling Scenario D (from 33.5 percent to 31.5 percent).

  Table 6-23 presents absolute differences in the numbers and the percentage changes of journeys by auto. The absolute change in auto commuters into and within the Manhattan CBD would range from a decrease of 11,790 journeys under Scenario B to a decrease of 27,221 journeys under Tolling Scenario E.

[70] BPM traffic modeling considers a toll only for entering a zone, although legislation allows for tolling those remaining in the zone. As detailed in **Chapter 2, "Project Alternatives,"** at this time, the Project Sponsors consider vehicles that remain in the Manhattan CBD to be those that were not detected entering but must have been remaining in the Manhattan CBD since they were detected leaving.

Table 6-22. Percentage of Worker Journeys by Auto To, Within, and From the Manhattan CBD

GEOGRAPHY	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
Workers Commuting by Auto To and Within the Manhattan CBD	17.3%	16.5%	16.6%	16.2%	15.8%	15.0%	15.8%	16.5%
Workers Commuting by Auto From the Manhattan CBD	33.5%	32.4%	32.7%	32.1%	31.5%	31.7%	32.2%	32.3%

Source: BPM, WSP 2021.

Table 6-23. Change in Numbers of Worker Journeys by Auto To, Within, and From the Manhattan CBD

GEOGRAPHY	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
Workers Commuting by Auto To and Within the Manhattan CBD	270,179	-12,552 (-4.6%)	-11,790 (-4.4%)	-17,271 (-6.4%)	-23,877 (-8.8%)	-27,221 (-10.1%)	-24,230 (-9.0%)	-13,264 (-4.9%)
Workers Commuting by Auto From the Manhattan CBD	12,535	-482 (-3.8%)	-328 (-2.6%)	-661 (-5.3%)	-961 (-7.7%)	-916 (-7.3%)	-621 (-5.0%)	-550 (-4.4%)

Source: BPM, WSP 2021.

- **Switch modes of commute to non-vehicular option(s) to avoid the toll.** The feasibility and frequency of selecting this option would depend in part on the availability of non-vehicular commute options near the commuter's place of work and/or residence. Some commuters could choose to continue to drive toward the Manhattan CBD, but park outside of the Manhattan CBD and walk or transition to public transportation for final leg of their commute to avoid the toll. The likelihood of commuters choosing to do this would depend on the availability and cost of parking near transit stations outside the Manhattan CBD coupled with the cost of that transit journey, in comparison to the cost of the new toll as well as the total time duration of such a trip. The BPM results indicate that a small number of commuters would choose this option (for more information, see **Subchapter 4D, "Transportation: Parking"**). As shown in **Table 6-24 and Table 6-25**, with the CBD Tolling Alternative, there would be increases in the share of commuters using public transportation and walking/biking to, from, and within the Manhattan CBD, except for Manhattan CBD residents who work in the Manhattan CBD, who would generally continue to use public transportation, walk, and bike at the same rate as in the No Action Alternative. Overall, under Tolling Scenario E there would be the highest percentage of workers electing to commute by public transportation (82.7 percent, compared to 80.7 percent in the No Action Alternative). Under Tolling Scenario B, there would be a slight decrease in public transportation usage from this subset of Manhattan CBD commuters, likely due to the relatively inelastic price sensitivity of

auto commuters combined with the scenario's easing congestion, which in turn would marginally increase the attractiveness of commuting by auto (e.g., taxi/FHV) within the Manhattan CBD. This phenomenon would be counterbalanced by reduced congestion in the Manhattan CBD, making some bus routes run faster and more reliable.

- **Telecommute, or telecommute more often, to eliminate or reduce the frequency of incurring the toll.** Though not a viable option for all types of work, telecommuting is growing (and will continue to grow with or without CBD Tolling Alternative) based on continual improvements in technologies, restructuring of office space, and other factors, including but not limited to the influence of the COVID-19 pandemic, cost savings, and benefit and lifestyle offerings. The degree to which the CBD Tolling Alternative would also incentivize this behavior would depend on the specific cost increase for a given worker, which would be based not only on the cost of the toll but also any potential crossing credits and/or exemptions, as well as the employee's specific work environment and workplace policies.
- **Commute earlier or later to avoid incurring the toll.** Though not a viable option for many workers, those who can adjust their work hours could elect to commute during off-peak and/or overnight hours to reduce the cost of a toll associated with auto commuting. Tolling Scenarios E and F would have the greatest potential to incentivize this behavior because they would have the largest cost differential between peak and non-peak toll rates.
- **Seek new employment opportunities (or other workplace locations with the same employer) at location(s) that would not involve incurring the toll.** Some commuters to the Manhattan CBD might decide to relocate or switch jobs to locations outside the Manhattan CBD. The CBD Tolling Alternative could also result in new workplace decision-making for those who would not incur a toll based on their existing commute; members of the labor force could find new job opportunities because other toll-affected workers could elect to vacate their positions to avoid tolling. In some instances, there could be a societal cost associated with decision-making that is a benefit to individuals. For example, a member of the labor force currently residing in the Bronx and who commutes by subway into the Manhattan CBD could instead choose to commute by auto to a job closer to home in the Bronx or upper Manhattan. Overall, Tolling Scenarios E and F (with the highest toll rates) would be the tolling scenarios most likely to incentivize this behavior, while Tolling Scenario A (with the lowest toll rates) would be the least likely tolling scenario to incentivize this behavior.

  The feasibility and frequency of such options would largely depend on the availability of similar employment opportunities at locations that would avoid the toll and that otherwise would be a more desirable commuting option. Since the BPM is a regional transportation model used to predict changes in mode and route that would result from modifications to the transportation system—using adopted regional population, labor force, and employment forecasts—it does not (and cannot) predict changes to the numbers of residents, workers, or jobs in the region. The BPM projections are predictive of changes in mode choice, but because they must hold the number of jobs steady, the projections assume that any vacated positions within the region would be filled by other labor force participants. This analysis therefore does not rely on BPM results for determining potential effects on labor supply within the region; rather, it considers the potential industry effects by conservatively assuming that positions currently occupied by auto commuters could be vacated and potentially not be filled by other labor force participants.

Table 6-24. Percentage of Worker Journeys by Non-Auto To and From the Manhattan CBD

GEOGRAPHY AND MODE	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
Workers Commuting from Outside the Manhattan CBD to the Manhattan CBD								
Percentage by Transit	80.7%	81.6%	81.7%	81.9%	82.4%	82.7%	82.5%	81.8%
Percentage by Walk/Bike	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Workers Commuting from Within the Manhattan CBD to the Manhattan CBD								
Percentage by Transit	57.2%	57.3%	56.5%	57.2%	57.4%	57.2%	57.2%	56.6%
Percentage by Walk/Bike	33.8%	33.8%	33.9%	33.7%	33.6%	33.7%	33.7%	33.7%
Workers Commuting from Within the Manhattan CBD to Outside the Manhattan CBD								
Percentage by Transit	63.8%	64.7%	64.4%	65.0%	65.6%	65.4%	65.0%	65.0%
Percentage by Walk/Bike	2.8%	2.9%	2.9%	2.9%	2.9%	2.9%	2.8%	2.8%

Source: BPM, WSP 2021.

Note: When the BPM was developed in 2005, there was insufficient data available to reliably estimate bike journeys; based on 2012–2016 CTPP data the BPM results tend to underreport walk/bike journeys. In addition, the BPM is best suited for predicting travel by automobile and transit; the internal calculations in the model related to routes available to automobiles result in the prediction of negligible reductions in the number of walk/bike journeys in some tolling scenarios.

Table 6-25. Change in Number of Worker Journeys by Non-Auto To and From the Manhattan CBD

GEOGRAPHY AND MODE	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
Workers Commuting from Outside the Manhattan CBD to the Manhattan CBD								
Number by Transit	1,126,889	+12,280 (+1.1%)	+13,082 (+1.2%)	+16,877 (+1.5%)	+23,482 (+2.1%)	+26,717 (+2.4%)	+24,083 (+2.1%)	+14,351 (+1.3%)
Number by Walk/Bike	13,933	-28 (-0.2%)	-331 (-2.4%)	+67 (0.5%)	-158 (-1.1%)	-67 (-0.5%)	-133 (-1.0%)	-102 (-0.7%)
Workers Commuting from Within the Manhattan CBD to the Manhattan CBD								
Number by Transit	94,328	+263 (+0.3%)	-1,157 (-1.2%)	+308 (+0.3%)	+595 (+0.6%)	+485 (+0.5%)	+268 (+0.3%)	-851 (-0.9%)
Number by Walk/Bike	55,738	0 (0.0%)	+144 (+0.3%)	+45 (+0.1%)	-69 (-0.1%)	+100 (+0.2%)	+4 (0.0%)	-184 (-0.3%)
Workers Commuting from Within the Manhattan CBD to Outside the Manhattan CBD								
Number by Transit	23,881	+181 (+0.8%)	+187 (+0.8%)	+147 (+0.6%)	+271 (+1.1%)	+56 (+0.2%)	+164 (+0.7%)	+280 (+1.2%)
Number by Walk/Bike	1,041	+19 (+1.8%)	+61 (+5.9%)	+24 (+2.3%)	+24 (+2.3%)	+25 (+2.4%)	-18 (-1.7%)	-9 (-0.9%)

Source: BPM, WSP 2021.

Note: When the BPM was developed in 2005, there was insufficient data available to reliably estimate bike journeys; based on 2012–2016 CTPP data the BPM results tend to underreport walk/bike journeys. In addition, the BPM is best suited for predicting travel by automobile and transit; the internal calculations in the model related to routes available to automobiles result in the prediction of negligible reductions in the number of walk/bike journeys in some tolling scenarios.

- **Relocate their place of residence to a location within the Manhattan CBD.** Existing or new workers with jobs in the Manhattan CBD could elect to move to a residence within the Manhattan CBD and walk/bike to work or commute by transit to avoid a toll associated with auto commuting. Tolling Scenarios E and F would have the greatest potential to incentivize this behavior because they would have the highest toll rates; Tolling Scenario E would also have the greatest potential to reduce congestion and improve other quality-of-life factors within the Manhattan CBD. However, the CBD Tolling Alternative would have a marginal influence on residential location decision-making because potential cost savings associated with eliminating a toll would be far outweighed by other cost-of-living and quality-of-life factors. Given the relatively high rents and home prices within the Manhattan CBD compared with other locations within the study area, those considering a move because of the cost of tolling would be more likely to locate in areas outside the Manhattan CBD near transit to avoid the toll. In addition, those moving into the Manhattan CBD with a personal auto would incur new tolling costs for non-commute trips, thereby diminishing the cost savings.
- **Relocate their place of residence to a location closer to transit outside the Manhattan CBD.** Existing or new workers with jobs in the Manhattan CBD could elect to move to a residence closer to transit and park-and-ride commute to avoid a toll associated with auto commuting. Tolling Scenarios E and F would have the greatest potential to incentivize this behavior because they would have the greatest cost differential between peak and non-peak toll fees.

  Pass-through commuters who drive through the Manhattan CBD would either continue to drive through and pay the Manhattan CBD toll or select an alternative route that avoids the toll. The frequency and feasibility of this option is dependent on the length of time associated with re-routing as well as the continuous improvement of live traffic and wayfinding information to avoid the toll.

  As noted above, the BPM projections assume that in the aggregate, there would be no change in the total employment or overall workforce commutes into and within the region as a result of the CBD Tolling Alternative (Table 6-26). However, it is possible that jobs in certain industries could be affected at a greater rate than suggested by the net results of the BPM if those industries and occupations had a higher percentage of workers who commute by auto, or if certain locations within the Manhattan CBD were highly dependent on auto commuting. For the following reasons, this is not expected to occur as a result of the CBD Tolling Alternative:

Table 6-26. Daily Worker Journeys To and Within the Manhattan CBD (All Modes of Transportation)

GEOGRAPHIC AREA OF ORIGIN	NO ACTION TOTAL JOURNEYS	NET CHANGE IN DAILY WOR ER JOURNEYS BY TOLLING SCENARIO AS COMPARED TO THE NO ACTION ALTERNATIVE						
		A	B	C	D	E	F	G
New York City	1,008,469	-4,288	-4,990	-5,698	-7,058	-7,718	-7,223	-5,869
Bronx County	97,518	-607	-697	-920	-1,159	-1,346	-777	-1,109
Kings County (Brooklyn)	282,439	-1,776	-1,844	-2,533	-2,755	-3,274	-2,242	-1,976
New York County (Manhattan)	340,690	-908	-658	-816	-654	-289	-1,231	-1,390
Inside Manhattan CBD	164,814	282	80	490	666	835	475	279
Outside Manhattan CBD	175,876	-1,190	-738	-1,306	-1,320	-1,124	-1,706	-1,669
Queens County	260,444	-1,688	-2,448	-2,448	-3,109	-3,547	-3,820	-2,077
Richmond County (Staten Island)	27,378	691	657	1,019	619	738	847	683
Long Island Counties[1]	128,802	2,610	3,191	2,451	2,470	2,975	1,834	3,400
New York Counties North of New York City[2]	101,745	-1,757	-1,334	-1,003	-1,473	-1,731	-1,498	-1,398
New Jersey Counties[3]	264,412	3,763	3,326	4,612	6,588	7,622	7,001	4,891
Connecticut Counties[4]	57,639	-365	-245	-336	-554	-1,134	-122	-1,074
TOTAL	1,561,067	-37	-52	26	-27	14	-8	-50

Source: BPM, WSP 2021.

1 Long Island counties includes Nassau and Suffolk.

2 Counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.

3 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.

4 Connecticut counties include Fairfield and New Haven.

- **CTPP data suggest that the propensity to commute by auto is related more to distance from public transit and the availability of free parking, which can correlate with certain types of work, rather than to needs for commuting by auto inherently related to a worker's industry or occupational category.** Therefore, the increased cost for those who commute by car would not disproportionately affect the operations of a specific industry, although it may incentivize workers currently incentivized to drive by the availability of free parking to switch to a transit mode (promoting the goals of the Program).[71] The highest rate of auto commuting in the Manhattan CBD occurs in Census Tract 21 in Lower Manhattan (**Figure 6-5**), an area that includes part of Chinatown and several large municipal buildings. The availability of parking placards and/or free parking for some municipal employees likely contributes to the higher numbers of workers commuting by auto to Census Tract 21, rather than a business-specific need for personal automobiles. Within two East Village/Lower East Side census tracts that also have very high rates of auto commuting in the Manhattan CBD, over 25 percent of the jobs are associated with facilities that provide free parking.

71 As detailed in **Section 6.2.2**, the NAICS Finance, Insurance, Real Estate and Rental and Leasing industry category and the SOC Business and Financial Operations Specialists and Legal occupational categories had only slightly higher representation within the highest auto commute locations of the Manhattan CBD. Salaries within these occupations are relatively high, suggesting that workers would be less price-sensitive to the incremental cost associated with tolling, particularly when factoring for the value of shorter commute times due to reduced congestion.

- **Manhattan CBD locations with the highest auto-commuting mode share have relatively low concentrations of total commuters.** Within the area of the Manhattan CBD with the highest rate of people who commute by auto from locations outside the Manhattan CBD—in the East Village and Lower East Side neighborhoods—relatively few total workers from outside the Manhattan CBD commute to this area, representing just over 2 percent of all workers commuting from outside the Manhattan CBD into the Manhattan CBD. The disincentive to drive created by the Project would not adversely affect economic conditions within or outside of the Manhattan CBD.
- **The potentially affected workforce who work outside of the Manhattan CBD is small.** The BPM estimates that 12,535 Manhattan CBD residents commute by auto to work at jobs outside the Manhattan CBD represent approximately 0.01 percent of the regional labor force. Of those who drive to work in other locations in New York City, only 540 are driving to jobs located farther than one-half mile of a rail (subway or Staten Island Railway) station, express bus stop, or express stop. Those workers who drive to New Jersey collectively comprise less than 2 percent of the employment within any New Jersey municipality.
- **Most of the potentially affected workforce who work inside the Manhattan CBD live and/or work near transit:**
  - **Approximately 99 percent of auto commuters to the Manhattan CBD have jobs that are close to transit.**[72] The ease of transit access within the Manhattan CBD allows the subset of car commuters to the Manhattan CBD who would be discouraged by toll costs and do not have transit access near their homes, to instead drive to a transit station and complete their commute by transit. The estimated 8,470 employees who work at locations more than one-half mile from a subway station or SBS stop in the Manhattan CBD represent small fractions of all Manhattan CBD workers in any specific industry and occupational category.
  - **Of the estimated 142,506 people who currently commute into the Manhattan CBD by car, more than one-third drive from residences in New York City that are close to transit.** Most workers living in these parts of New York City have a relatively easy option of riding a subway or train to the Manhattan CBD.
- **For some auto commuters, the underlying benefits of driving would remain in place with or without a Manhattan CBD toll.** With a toll, many drivers would continue to drive, because the additional cost of the toll may be offset by the value of a shorter commute time due to reduced congestion, and in some cases, the value of free parking available to them by an employer.

With respect to Manhattan CBD reverse commuters, the BPM projections indicate that in the aggregate, there would be minimal overall change in the number of workers who commute from the Manhattan CBD to other regional locations because of the CBD Tolling Alternative (Table 6-27). As compared to the No Action Alternative, the differences range from a 0.8 percent work-journey decrease (80 workers) under Tolling Scenario B to a 2.2 percent decrease (835 workers) under Tolling Scenario E. Under Tolling Scenario B, there would be a slight increase in Manhattan CBD resident-workers commuting to jobs in Long Island counties and in Manhattan outside the Manhattan CBD. Under Tolling Scenario E, the decrease in

[72] It is noted that proximity to transit does not necessarily make it accessible to some disabled individuals.

Manhattan CBD resident-workers commuting to jobs outside of the Manhattan CBD could be due to those workers taking jobs vacated by non-CBD residents who were working in the Manhattan CBD, but who took jobs outside of the Manhattan CBD to avoid the toll. These levels of change in workforce commuting would not disrupt employment in any industry at the regional level. Even if all of the estimated 12,535 Manhattan CBD reverse commuters who drive to their jobs elected to change positions in order to avoid tolling, they represent less than 5 percent of the labor force living within the Manhattan CBD, and approximately 0.1 percent of the labor force in the region. As a result, the CBD Tolling Alternative would not be likely to adversely affect any particular industry because of its potential to affect reverse commuters from the Manhattan CBD.

Table 6-27. Daily Worker Journeys from the Manhattan CBD (All Modes of Transportation)

GEOGRAPHIC AREA OF DESTINATION	NO ACTION TOTAL JOURNEYS	NET CHANGE IN DAILY WORKER JOURNEYS BY TOLLING SCENARIO AS COMPARED TO THE NO ACTION ALTERNATIVE						
		A	B	C	D	E	F	G
New York City (not including Manhattan CBD)	23,042	-107	55	-154	-313	-326	-206	-176
Bronx County	1,009	19	30	33	-2	12	5	1
Kings County (Brooklyn)	5,369	-28	-36	-88	-183	-153	-123	-67
New York County (Manhattan) Outside Manhattan CBD	15,439	-118	120	-50	-112	-178	-79	-79
Queens County	1,205	16	-54	-42	-6	-2	-5	-21
Richmond County (Staten Island)	20	4	-5	-7	-10	-5	-4	-10
Long Island Counties[1]	2,751	-165	8	-170	-242	-205	-218	-97
New York Counties North of New York City[2]	565	-28	-38	-23	-55	-58	-32	-67
New Jersey Counties[3]	9,756	97	-7	-69	23	-110	77	128
Connecticut Counties[4]	1,343	-79	-98	-74	-79	-136	-96	-67
TOTAL	37,457	-282	-80	-490	-666	-835	-475	-279

Source: BPM, WSP 2021.

1. Long Island counites include Nassau and Suffolk.
2. New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
3. New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
4. Connecticut counties include Fairfield and New Haven.

Non-Work-Related Journeys

For non-work-related journeys, the BPM assumes that the total number of these discretionary journeys remains steady regionwide, but the destination of a non-work-related journey (e.g., a journey for shopping or entertainment) could change because of a change to the transportation network. **Table 6-28** presents the BPM results related to changes in non-work-related journeys (all modes) to the Manhattan CBD with the CBD Tolling Alternative as compared to the No Action Alternative. Under all tolling scenarios, the total number of these journeys would remain essentially the same between tolling scenarios (the small differences in total journeys are equivalent to rounding errors in the model results), but the destination of the non-work-related journeys would vary. The largest contributing factor in terms of reductions under all tolling scenarios would be forgone journeys to the Manhattan CBD from areas of Manhattan north of 60th Street. **Table 6-28** also shows marginal increases in non-work Manhattan CBD journeys originating within

the Manhattan CBD, likely due to reductions in congestion, which would encourage additional non-work journeys within the Manhattan CBD.

Table 6-29 provides additional detail on how the CBD Tolling Alternative would alter discretionary journey-making decisions; Tolling Scenario D is used in this example because it would result in the greatest reduction in non-work-journeys to the Manhattan CBD. The reductions in non-work-related journeys would be related to reductions in journeys by auto and offset by increases in journeys by public transit. Notable decreases in auto journeys would occur for Manhattan north of the Manhattan CBD, Brooklyn, and Queens.

Table 6-28. Net Change in Non-Work-Related Journeys To and Within the Manhattan CBD vs. No Action Alternative (All Modes of Transportation)

GEOGRAPHIC AREA OF ORIGIN	NO ACTION TOTAL	TOLLING SCENARIO –NET CHANGE						
		A	B	C	D	E	F	G
New York City	796,263	-3,105	-1,213	-3,033	-6,027	-5,347	-2,795	-4,116
Bronx County	41,511	-1,272	-540	-1,159	-1,804	-1,820	-1,197	-1,110
Kings County (Brooklyn)	80,405	-1,212	-407	-1,187	-2,323	-2,032	-1,015	-1,762
New York County (Manhattan)	601,900	-151	-538	-1,008	-1,036	-704	-769	-594
Inside Manhattan CBD	513,511	1,954	1,102	1,468	2,753	2,914	1,995	1,869
Outside Manhattan CBD	88,389	-2,105	-1,640	-2,476	-3,789	-3,618	-2,764	-2,463
Queens County	61,828	-1,190	-592	-1,183	-1,759	-1,405	-699	-1,415
Richmond County (Staten Island)	10,619	720	864	1,504	895	614	885	765
Long Island Counties[1]	16,566	622	748	109	2	223	158	816
New York Counties North of New York City[2]	7,640	-478	-458	-450	-888	-891	-678	-574
New Jersey Counties[3]	46,807	2,186	2,775	3,380	2,894	3,149	3,498	3,256
Connecticut Counties[4]	1,514	-28	272	358	293	206	387	250
TOTAL	868,790	-803	2,124	364	-3,726	-2,660	570	-368

Source: BPM, WSP 2021.

1. Long Island counties includes Nassau and Suffolk.
2. New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
3. New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
4. Connecticut counties include Fairfield and New Haven.

Table 6-29. Change in Regional Non-Work-Related Journeys To and Within the Manhattan CBD: Tolling Scenario D versus No Action Alternative

GEOGRAPHIC AREA OF ORIGIN	TOTAL NON-WOR RELATED JOURNEYS NO ACTION	TOTAL NON-WOR RELATED JOURNEYS SCENARIO D	CHANGE IN JOURNEYS	PERCENTAGE CHANGE IN JOURNEYS
New York City	796,263	790,236	-6,027	-0.8
Bronx County	41,511	39,707	-1,804	-4.3%
Kings County (Brooklyn)	80,405	78,082	-2,323	-2.9%
New York County (Manhattan)	601,900	600,864	-1,036	-0.2%
Inside Manhattan CBD	513,511	516,264	2,753	0.5%
Outside Manhattan CBD	88,389	84,600	-3,789	-4.3%
Queens County	61,828	60,069	-1,759	-2.8%
Richmond County (Staten Island)	10,619	11,514	895	8.4%
Long Island Counties[1]	16,566	16,568	2	0.0
New York Counties North of New York City[2]	7,640	6,752	-888	-11.6
New Jersey Counties[3]	46,807	49,701	2,894	6.2
Connecticut Counties[4]	1,514	1,807	293	19.4
TOTAL	868,790	865,064	-3,726	-0.4

Source: BPM, WSP 2021.

1. Long Island counties includes Nassau and Suffolk.
2. New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
3. New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
4. Connecticut counties include Fairfield and New Haven.

The BPM assumes that the total number of non-work-related journeys in the region would remain the same in the No Action and CBD Tolling Alternatives. This is a reasonable assumption given the size of the regional study area; non-work-related journeys that may no longer occur within the Manhattan CBD are expected to be captured within the broader study area. Reductions in journeys to the Manhattan CBD would likely be captured in other areas of Manhattan outside the Manhattan CBD, in New York City, or in the region. There would not be a loss of consumer spending on a regional basis, except for spending that would be forgone by consumers traveling by car to the Manhattan CBD, who could instead use a portion of their discretionary spending money for the toll. The toll would effectively reduce the overall expenditure potential for people traveling by car into the Manhattan CBD; this would reduce expenditure potential for individuals and the potential revenue that businesses would have captured but that would now be spent on the toll. As noted in **Chapter 18, "Agency Coordination and Public Outreach,"** during early public outreach for the Project in fall 2021, members of the public raised concern about potential effects of losses in consumer spending at businesses, cultural and sporting events, and tourist areas like Chinatown and Broadway. However, given that a vast majority of non-work-related journeys to the Manhattan CBD are not conducted by auto, that some auto journeys would transition to public transit, and that some auto journeys would continue (with potential reductions in some discretionary expenditures to compensate for the toll

cost), a reduction in non-work journeys to the Manhattan CBD would not be expected to substantively alter expenditures within any particular industry.[73]

[The tourism industry in the Manhattan CBD is not dependent on travel by personal vehicles or taxis/FHVs, because the Manhattan CBD and tourist destinations within it are very well-served by public transit. Travel writing on New York City frequently cites transit, especially the New York City subway system, as the most convenient way to get around New York City.[74] This is supported by a 2014 travel survey of visitors to the Empire State Building observation deck, a notable tourist attraction, which found that approximately 4 percent of the visitors arrived by private auto or taxi, and the remainder traveled by transit, walk, or tour bus modes.[75] Studies have identified investments in mass transit as important to supporting the health and growth of New York City's tourism industry, both before[76] and after[77] the COVID-19 pandemic. Furthermore, traffic congestion within the Manhattan CBD, which leads to low travel speeds and unreliable travel times, can contribute to a poor-quality experience for tourists.

Visitors from the surrounding region (i.e., New York, New Jersey, Connecticut, and Pennsylvania) often travel to New York City by rail transit rather than by automobile,[78] and for those who drive to the city, it is likely that many park their vehicles and shift to transit for travel within the city. Furthermore, driving to and from the Manhattan CBD is already expensive given the very limited availability of free or low-cost parking and the cost of taxi/FHV fares, and it is likely that tourists who drive have higher incomes. For these individuals, the additional cost of the toll may reduce their discretionary expenditures slightly or incentivize them to choose other modes of transportation during their visit but would be unlikely to cause them to forego a visit to the Manhattan CBD. At the regional level, any forgone non-work-related journeys to the Manhattan CBD and associated expenditure would be captured elsewhere.

Tourist visitation data from London, England, and Stockholm, Sweden, indicates that the number of tourists visiting these cities continued to grow following the implementation of congestion-based pricing programs in 2003 and 2007, respectively. In London, the number of visiting tourists increased from 11 million in 2002 to more than 19 million in 2016. In Stockholm, the number of commercial overnight stays increased by

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73 Literature research of congestion-based pricing programs in London, England, Stockholm, Sweden, *[and Singapore]* found that these programs had not adversely affected retail markets. Retail businesses in the central London charging zone have outperformed retail businesses in inner and outer London in terms of sales, profitability, and employment growth. Overall, five years after the event there is no measurable evidence of any differential impact of the central London congestion charging scheme on business and economic activity, at the aggregate level, based on analysis and surveys conducted (https://content.tfl.gov.uk/central-london-congestion-charging-impacts-monitoring-sixth-annual-report.pdf). In Stockholm, studies of retail markets did not reveal adverse effects resulting from congestion charges. A durables survey within shopping centers, malls, and department stores conducted during the Stockholm program's trial period found that these entities developed at the same rate as the rest of the country; the same was true for other retail sectors *[(https://www.transportportal.se/swopec/cts2014-7.pdf). In Singapore, surveys suggested that the pricing did not change business conditions or location patterns, and that overall, the business community responded positively to the program (https://ops.fhwa.dot.gov/publications/fhwahop08047/intl_cplessons.pdf).]*

74 *[https://www.nycgo.com/plan-your-trip/basic-information/transportation-in-nyc/getting-around.]*

75 *[Vanderbilt Corridor and One Vanderbilt Final Environmental Impact Statement. March 2015. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/vanderbilt/10_feis.pdf. pg. 10-7.]*

76 *[Ibid. pg. 34.]*

77 *[Office of the New York State Comptroller. The Tourism Industry in New York City" Reigniting the Return. April 2021. Available: https://www.osc.state.ny.us/files/reports/osdc/pdf/report-2-2022.pdf. pg. 16.]*

78 *[NYC and Co. https://indd.adobe.com/view/e91e777a-c68b-4db1-a609-58664a52cffd. pg. 7.]*

approximately 60 percent from 2008 to 2019. These data suggest that congestion-based pricing schemes did not adversely affect the tourism industries of these cities. In addition, in the central London charging zone, the hotel and restaurant sectors (both of which are dependent on tourism) registered stronger business performance since the introduction of charging, with consistent growth in employment and the numbers of businesses.[79]

Overall, these data support the EA conclusion that the CBD Tolling Program would not be expected to substantively alter expenditures within any particular industry, including the tourism industry, restaurants, and Broadway.]

The CBD Tolling Alternative would also provide regional benefits by establishing a reliable, recurring local source of funding for MTA capital projects, which would allow MTA to reinvest in and improve its transportation network. This would be expected to facilitate growth in non-work-related journeys to the Manhattan CBD.

Taxi and For-Hire Vehicle Industry

Under some tolling scenarios there could be an increase in taxi and FHV fares that could reduce demand and industry revenues for taxis and/or FHVs.[80] As detailed in **Subchapter 4A, "Transportation: Regional Transportation Effects and Modeling,"** the tolling scenarios and additional analyses assess a variety of tolling policies for taxis and FHVs ranging from unlimited tolling for taxis and FHVs each day to a complete exemption from paying the Manhattan CBD toll.

The TLC requires that passengers reimburse the taxi driver for any toll costs during the trip; when no passengers are in the vehicle, drivers pay the toll today as part of the cost of doing business. TLC rules for high-volume FHVs (i.e., Uber and Lyft) and require that FHV services collect and remit to the TLC information on the itemized fare for the trips charged to the passengers, including the fare, toll, taxes and gratuities. ***[As updated for this Final EA, the Project Sponsors have committed that TBTA will ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final toll structure.]***

New York City's Commitment to Supporting Taxi and FHV Drivers

In 2019, New York City became the first city in the world to implement a trip-based, guaranteed minimum pay standard for high-volume FHV drivers, whether they drive their own vehicle or lease an FHV. The TLC also modified rules for yellow and green taxis to increase driver income protections, including reducing the daily maximum credit card surcharge and increasing accessible dispatch fees.

In 2021, the City implemented a medallion relief program and loan guaranty program to provide relief for owners with five or fewer medallions. Both programs provide financial assistance and free legal representation to help negotiate with lenders to reduce loan balances and lower monthly payments.

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79 *[Transport for London, July 2007. Central London Congestion Charging: Impacts Monitoring (Fifth Annual Report).]*

80 Paratransit vehicles, although part of the taxi/FHV industry, are not addressed in this section because the CBD Tolling Alternative would not impose a new toll on paratransit vehicles. With the CBD Tolling Alternative, paratransit vehicles would benefit from reduced congestion on some roadways within the Manhattan CBD.

Table 6-30 shows the projected reductions in daily VMT for each of the various tolling scenarios without modifications.[81] The VMT estimates shown in the table do not include cruising miles without a customer, and only reflect daily VMT for travel when the taxi/FHV has a customer. As shown in the table, the CBD Tolling Alternative would reduce the overall VMT for taxis and FHVs regionwide by 1 to 3 percent. These reductions would be greatest in New York City, ranging from 5 to 9 percent in tolling scenarios that do not include a cap or exemption for tolls on taxis and FHVs (Tolling Scenarios A, D, and G) and 1 to 5 percent in those that do have caps and/or exemptions (Tolling Scenarios B, C, E, and F).

The CBD Tolling Alternative would result in larger reductions in taxi/FHV VMT within the Manhattan CBD, which is the core service area for yellow taxis, as well as in Manhattan overall. As shown in Table 6-30, under Tolling Scenarios A, D, and G, which would have uncapped tolls for both taxis and FHVs, reductions in taxi/FHV VMT in the Manhattan CBD would range from almost 7 percent for Tolling Scenario A to close to 17 percent for Tolling Scenario D. In Manhattan overall, VMT reductions would range from 11 to 17 percent. Under Tolling Scenarios C and F, which would exempt taxis but would toll FHVs up to three times a day, VMT reductions would range from 3.5 percent to 7.9 percent in the Manhattan CBD and 7 to 10 percent for Manhattan overall. Given that taxis would not be tolled under Tolling Scenarios C and E, it is likely that taxis would experience increases in VMT while FHVs would experience greater VMT reductions.

In the Tolling Scenarios B and F, in which taxis and FHVs would be tolled a maximum of once per day, the reduction in taxi/FHV VMT within the Manhattan CBD and Manhattan overall would be lower and in Tolling Scenario F, taxi/FHV VMT within the Manhattan CBD is predicted to increase slightly because of the combination of the larger toll cost, which would make taxi/FHV a more attractive mode, and the reduction in congestion, which would increase the utility of commuting by taxi/FHV within the Manhattan CBD).

In addition, in response to concerns expressed during the public outreach process with respect to the anticipated effects of the Project on taxi and FHV drivers, the Project Sponsors considered modified several modified tolling scenarios with caps and/or exemptions for taxis and FHVs to understand the effects of such a modification. This included modifications of Tolling Scenarios A and D with a cap on tolls of once per day for taxis and FHVs (like Tolling Scenarios B and F), a modified Tolling Scenario D with both taxis and FHVs exempt from the toll, and a variation of Tolling Scenario G (referred to as Tolling Scenario G1) with a cap on tolls of once per day for taxis and FHVs. The analysis conducted demonstrated that with these modifications, these tolling scenarios would have substantially less reduction in taxi/FHV VMT in the Manhattan CBD. For more information, see Subchapter 4A, **"Transportation: Regional Transportation Effects and Modeling."** Overall, the more exemptions and caps provided, the higher tolls need to be to meet the Project's congestion and revenue objectives. However, if taxis and FHVs are charged for each trip, the demand for their service would decline, as would the number of trips they make.

[81] Taxis and FHVs are a single mode in the BPM and therefore cannot be presented separately.

Table 6-30. Net Change in Taxi/For-Hire Vehicle Daily Vehicle-Miles Traveled vs. No Action Alternative

GEOGRAPHIC AREA	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
New York City	2,503,176	-128,847 (-5.1)	-29,731 (-1.2)	-84,406 (-3.4)	-219,068 (-8.8)	-130,412 (-5.2)	-25,521 (-1.0)	-147,687 (-5.9)
Bronx County	272,450	-8,392 (-3.1%)	-5,717 (-2.1%)	-6,426 (-2.4%)	-9,346 (-3.4%)	-3,991 (-1.5%)	-1,959 (-0.7%)	-7,831 (-2.9%)
Kings County (Brooklyn)	373,255	-33,855 (-9.1%)	-20,648 (-5.5%)	-10,247 (-2.7%)	-37,923 (-10.2%)	-27,854 (-7.5%)	-7,095 (-1.9%)	-39,183 (-10.5%)
New York County (Manhattan)	715,505	-77,843 (-10.9%)	-19,553 (-2.7%)	-51,989 (-7.3%)	-119,349 (-16.7%)	-73,223 (-10.2%)	-17,076 (-2.4%)	-87,944 (-12.3%)
Inside Manhattan CBD	323,998	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)
Outside Manhattan CBD	391,507	-56,345 (-14.4%)	-34,573 (-8.8%)	-40,618 (-10.4%)	-64,873 (-16.6%)	-47,602 (-12.2%)	-22,038 (-5.6%)	-60,187 (-15.4%)
Queens County	1,085,040	-3,873 (-0.4%)	+21,258 (+2.0%)	-10,804 (-1.0%)	-47,911 (-4.4%)	-19,342 (-1.8%)	+4,979 (+0.5%)	-7,812 (-0.7%)
Richmond County (Staten Island)	56,926	-4,884 (-8.6%)	-5,071 (-8.9%)	-4,940 (-8.7%)	-4,539 (-8.0%)	-6,002 (-10.5%)	-4,370 (-7.7%)	-4,917 (-8.6%)
Long Island Counties[1]	291,624	-1,050 (-0.4)	2,836 (1.0)	6,816 (2.3)	-3,159 (-1.1)	3,846 (1.3)	9,153 (3.1)	-2,775 (-1.0)
New York Counties North of New York City[2]	222,684	-3,316 (-1.5)	1,047 (0.5)	-206 (-0.1)	-4,694 (-2.1)	-2,547 (-1.1)	-1,118 (-0.5)	-2,905 (-1.3)
New Jersey Counties[3]	1,181,690	9,142 (0.8)	13,582 (1.1)	8,656 (0.7)	12,899 (1.1)	17,283 (1.5)	15,094 (1.3)	17,455 (1.5)
Connecticut Counties[4]	116,356	-2,922 (-2.5)	-1,762 (-1.5)	-4,273 (-3.7)	-3,455 (-3.0)	-4,235 (-3.6)	-2,496 (-2.1)	-1,903 (-1.6)
TOTAL	4,315,530	-126,993	-14,028	-73,413	-217,477	-116,065	-4,888	-137,815
PERCENTAGE CHANGE		-2.9	-0.3	-1.7	-5.0	-2.7	-0.1	-3.2

Source: BPM, WSP 2021.
Note: Projections include vehicle-miles traveled only during fares and do not include cruising without passenger(s).
1 Long Island counties includes Nassau and Suffolk.
2 New York counties north of New York City include Dutchess, Orange, Putnam, Rockland, and Westchester.
3 New Jersey counties include Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren.
4 Connecticut counties include Fairfield and New Haven.

Under tolling scenarios that would toll taxis and/or FHVs more than once a day, customers could choose to avoid the toll by switching to transit, walking, or biking to their destination in the Manhattan CBD, thereby reducing the frequency of taxi/FHV utilization. A reduction in congestion in the Manhattan CBD would improve drive-times and reduce passenger costs. However, the potential decrease in overall demand for taxis and FHVs ***[in tolling scenarios that toll taxis and/or FHVs more than once a day]*** could reduce employment in the taxi and FHV industries. The predicted change in overall taxi/FHV travel characteristics indicates that there could be some shift in business practices within the industry, particularly for yellow cabs operating in Manhattan. The projected reductions in VMT indicate potential economic costs within an industry in flux where journeys have already been shifting from taxis to FHVs and could correlate to lost revenues for both taxis and FHVs operating in New York City. Since driver income is directly related to the miles they travel with paying customers, these reductions could result in reductions in taxi and FHV employment. **Chapter 17, "Environmental Justice,"** evaluates this potential adverse effect on taxi and FHV drivers in more detail ***[and describes TBTA's commitment, new to the Final EA, to ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final toll structure to avoid an adverse effect on taxi and FHV drivers from the Project.]***

In terms of economic impacts on businesses and industries, the change in taxi and FHV operations and business practices***[without the new commitment described]***, while adverse for taxi and FHV drivers, would not ***[have resulted]*** in an adverse economic impact on the industry overall.[82] The potential reductions in revenue and employment would not be of an amount that could jeopardize the overall viability of the taxi/FHV industry within the region. Based on historic data from the TLC's Fact Book for 2018, the industry has experienced substantial fluctuations year to year in key metrics such as active drivers and daily average trips; the industry adjusts to remain viable as an industry and meet demand. For example, there were reductions in the number of active livery cars, yellow cabs, and green cabs beginning in 2015 with the introduction of high-volume FHV ride-hailing services (**Figure 6-7**). Between January 2016 and January 2019, the numbers of active yellow cabs, green cabs, and livery cars decreased by 11.1 percent, 45.0 percent, and 55.4 percent, respectively. There were also precipitous decreases in demand for taxi/FHV services during the height of the COVID-19 pandemic (**Figure 6-8**). Nevertheless, under both circumstances that industry has continued to provide service. With the CBD Tolling Alternative consumer demand for taxi/FHV service would continue to be met, and those consumers who are willing to pay the toll would be driven to locations within the Manhattan CBD. The taxi/FHV industry would continue to operate throughout the region and would continue to be able to meet the needs of its consumer base.

Chapter 17, "Environmental Justice," provides additional analysis of the potential for job losses in the taxi and FHV industry, where the majority of drivers identify as minority populations***[and describes in further detail the TBTA's commitment to ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final toll structure]***.

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[82] As noted in Chapter 5, Section 430 of the 2021 *CEQR Technical Manual*, an impact of a project that would substantially impair the ability of certain specific industries or categories or business to continue operating within New York City may be considered significant and adverse.

Paratransit Vehicles

With the CBD Tolling Alternative, qualifying vehicles transporting persons with disabilities would be exempt from the toll.[83] This includes Access-A-Ride paratransit service, which provides public transportation for customers with disabilities or certain qualifying health conditions. The CBD Tolling Alternative would provide benefits to improve paratransit services, such as reduced roadway congestion resulting in travel-time and reliability improvements.

Buses

Given the Project goal of reducing congestion in the Manhattan CBD, while also creating a new recurring funding source to support the MTA's Capital Program for funding public transportation capital projects, the various tolling scenarios consider crossing credits, discounts, and/or exemptions for buses because those transporting passengers presumably reduce vehicle congestion. The standard bus tolling rate can be set at a value distinct from other classes. A discounted rate may represent a lower rate for buses as compared to the truck rate (non-franchise buses are currently charged truck rates at TBTA facilities) or may be a discounted rate against the bus rate for certain types of buses (e.g., public transit buses). As detailed in **Chapter 2, "Project Alternatives,"** the tolling scenarios present a range of potential charging options for buses.

To the extent buses are charged full or discounted tolls under the tolling scenarios, the cost of the toll would be expected to be absorbed into overall operating costs. For subsidized public transit, these costs could result in additional subsidy requirements and a portion could ultimately be passed along to passengers in terms of ticket prices for carriers with variable ticket pricing or could be a component in periodic fare adjustments for fixed fare transit systems. Given the high passenger volumes of most bus services, the small incremental cost borne by any given passenger is not expected to be an amount that would deter ridership for a vast majority of passengers, and reduced ridership would not be expected to jeopardize the viability of bus service operations.

For non-subsidized service, increased operating costs would be expected to be passed on to the passenger or could result in reduced services. Smaller volume services such as commuter vans and jitney buses may experience a greater proportion of reduced ridership; however, if some price-sensitive commuter van and jitney riders switch to transit, they could benefit from the transit improvements facilitated by the CBD Tolling Alternative. For tour and charter buses, costs would be lower since the frequency of crossing in and out of the Manhattan CBD is much lower than public buses, and the cost of the toll would be passed on to a larger number of passengers.

Movement of Goods and Services, Including Freight Transport

As noted in **Chapter 18, "Agency Coordination and Public Outreach,"** during early public outreach for the Project in fall 2021 members of the public expressed concerns about the potential for increases in fees and other services such as deliveries within the Manhattan CBD. With the CBD Tolling Alternative, the volumes

[83] As currently designed, qualifying vehicles transporting a person with disabilities include vehicles with government-issued disability license plates and fleet vehicles owned or operated by organizations and used exclusively to provide transportation to people with disabilities.

of truck journeys into and within the Manhattan CBD are expected to remain similar to today because the need to deliver goods would remain the same; deliveries would still need to be made to restaurants, businesses, and residents regardless of the Manhattan CBD tolling implementation. As a result, the BPM assumes that journey origins and destinations of trucks and other commercial vehicles would remain constant between the No Action Alternative and all the tolling scenarios. In some cases, shipments could be consolidated to maximize the amount of product delivered if the route would incur the toll.

With the CBD Tolling Alternative, delivery trucks would incur an additional cost from a toll. **Table 6-31** identifies the toll rates for various truck types under each of the tolling scenarios. As shown in **Table 6-31**, the actual amount paid by an individual truck per day would vary based on the toll rate, whether there is a cap on the number of tolls per day, and the number of times a truck is detected entering or remaining in the Manhattan CBD. Depending on the number of trips a truck makes, the total cost might be less in a tolling scenario with a cap on the number of tolls per day or a tolling scenario with a lower toll rate but no cap.

Businesses in the Manhattan CBD that would be more likely to be adversely affected by increased delivery costs associated ***[with]*** tolling increases are small businesses that have a high rate of deliveries. In general, micro-businesses, which are small businesses with fewer than 20 employees, would be most sensitive to delivery cost increases. The types of businesses in the Manhattan CBD that would most likely be affected would be small businesses in the Retail Trade industry since they are dependent on frequent deliveries of smaller loads, and the cost of delivery of goods constitutes a higher portion of their operating costs. These include grocery stores, restaurants, and small market convenience stores. As shown in **Table 6-4**, approximately 10 percent of businesses in the Manhattan CBD are classified as Retail Trade. Although small independent grocery/convenience stores are not uniquely identified in **Table 6-4**, they would most likely be represented by micro-businesses in the Supermarkets and Other Grocery Except Convenience Stores (NAICS Code 445110) and Convenience Stores (NAICS Code 445120) industry sub-categories. There are approximately 600 such businesses within the Manhattan CBD, representing slightly less than 1 percent (0.7 percent) of all businesses within the Manhattan CBD. As described below, any cost increase associated with the ***[incremental toll costs due to the]*** CBD Tolling Alternative that ***[are]*** passed along to receiving businesses would be distributed among several customers per toll charge (since trucks make multiple deliveries) especially for businesses, including small businesses and micro-businesses, receiving smaller deliveries, thereby minimizing the effect of the toll increases on any individual business.

Table 6-31. Truck Treatment by Tolling Scenario

	S Base Plan	S Base Plan with Caps and Exemptions	S Low Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	S High Crossing Credits for Vehicles Using Tunnels to Access the CBD	S High Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	S High Crossing Credits for Vehicles Using Manhattan Bridges and Tunnels to Access the CBD, with Some Caps and Exemptions	S Base Plan with Same Tolls for All Vehicle Classes
Potential Crossing Credits							
Credit Toward the CBD Toll for Tolls Paid at the Queens-Midtown, Hugh L. Carey, Lincoln, Holland Tunnels	No	No	Yes	Yes	Yes	Yes	No
Credit Toward the CBD Toll for Tolls Paid at the Robert F. Kennedy, Henry Hudson, George Washington Bridges	No	No	No	No	No	Yes	No
Potential Exemptions and Limits (Caps) on Number of Tolls per Day							
Small and large trucks	No cap	Twice per day	No cap	No cap	No cap	Once per day	No cap
Approximate Toll Rate (Small Truck / Large Truck) [2, 3]							
Peak [4]	$18 / $28	$20 / $30	$28 / $42	$38 / $57	$46 / $69	$65 / $82	$12 / $12
Off Peak [5]	$14 / $21	$15 / $23	$21 / $32	$29 / $43	$35 / $52	$49 / $62	$9 / $9
Overnight [6]	$9 / $14	$10 / $15	$14 / $21	$19 / $29	$23 / $35	$33 / $41	$7 / $7

1 The information in this table was used for modeling purposes to evaluate the range of effects resulting from implementation of the CBD Tolling Alternative. Actual toll rates, potential crossing credits/exemptions and/or other discounts, and the time of day when toll rates would apply would be determined by the TBTA Board after recommendation by the Traffic Mobility Review Board. **Appendix 2E, "Project Alternatives: Definition of Tolling Scenarios,"** provides more detailed information on the rates, potential crossing credits/exemptions, and/or other discounts assumed for each tolling scenario.

2 Tolls would be higher during peak periods when traffic is greatest. These would be defined by TBTA in the final toll schedule. All tolling scenarios also include a higher toll on designated "Gridlock Alert" days, although the modeling conducted for the Project did not reflect this higher toll since it considers typical days rather than days with unusually high traffic levels.

3 Toll rates are using E-ZPass and are rounded. For all tolling scenarios, different rates would apply for vehicles not using E-ZPass.

4 Peak is 6:00 a.m. to 8:00 p.m. on weekdays except for Scenario F, where it is 6:00 a.m. to 10:00 a.m. and 4:00 p.m. to 8:00 p.m., and on weekends when peak is 10:00 a.m. to 10:00 p.m.

5 Off peak is 8:00 p.m. to 10:00 p.m. on weekdays except for Scenario F, where it is 10:00 a.m. to 4:00 p.m.

6 Overnight is 10:00 p.m. to 6:00 a.m. on weekdays except for Scenario F, where it is 8:00 p.m. to 6:00 a.m., and on weekends when overnight is 10:00 p.m. to 10:00 a.m.

[In addition, the incremental cost of the new toll passed to receivers could be further diluted by cost savings realized by shippers due to reduced congestion.] The CBD Tolling Alternative would reduce costs for truck deliveries related to the time spent making the delivery and costs associated with parking tickets. Specifically, with a reduction in congestion in the Manhattan CBD, truckers could make their deliveries more quickly, reducing labor costs associated with the delivery. In addition, with fewer automobiles entering the Manhattan CBD each day, the demand for parking would be reduced, which would free up legal curbside parking for delivery vehicles. Delivery trucks may be able to find legal parking more readily in the Manhattan CBD, thereby reducing the incidence of ticketing (fines for which frequently exceed $1,000 per truck per month[84]). *[In the New York City metropolitan area, service times (defined as the total time spent by a driver at the customer location) consistently exceeded an hour during the morning hours, which is when the bulk of deliveries are made. Reducing travel and service times would decrease the cost associated with delivery operations and, ultimately, lower the cost of the products consumed in New York City.[85]]* The extent of delivery cost savings would vary depending on the toll cost, the delivery route, timing of delivery, and the level of reduced congestion along the route that would be realized under the tolling scenarios.

[There are also less obvious business costs associated with congestion that could be reduced, such as the cost of remaining open for longer hours to process late deliveries; penalties for lost business revenue associated with missed schedules; cost of spoilage for time-sensitive, perishable deliveries; cost of maintaining greater inventory to cover the undependability of deliveries; costs of reverting to less efficient production scheduling processes; and the additional cost incurred because of access to reduced markets for labor, customer, and delivery areas.[86]

Review of research on congestion-based pricing programs in Singapore; London, England; and Stockholm, Sweden found that these programs had not adversely affected retail markets. In Singapore, surveys suggested that the pricing did not change business conditions or location patterns, and that overall, the business community responded positively to the program.[87] In London, analyses and surveys indicate congestion pricing has neutral regional economic impacts: five years after implementation of the central London congestion charging scheme there was no measurable evidence of any differential impact of the pricing on business and economic activity at the aggregate level. Annual surveys suggest businesses in the priced zone have outperformed those outside, with retail businesses in the central London charging zone outperforming retail businesses in inner and outer London in terms of sales, profitability, and employment growth.[88] In Stockholm, studies of retail markets did not reveal adverse effects resulting from congestion charges. A durables survey within shopping centers, malls, and department stores conducted during the

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84 Holguin-Veras, Jose, et al. September 2010. *Integrative Freight Demand Management in the New York City Metropolitan Area*. http://www.nyc.gov/html/dot/downloads/pdf/ohd-final-report.pdf.

85 *[Ibid.]*

86 *[Cambridge Systematics, Inc. and Texas Transportation Institute. September 2005. Traffic Congestion and Reliability Trends and Advanced Strategies for Congestion Mitigation. https://ops.fhwa.dot.gov/congestion_report/congestion_report_05.pdf.]*

87 *[K.T. Analytics, Inc. August 2008. Lessons Learned from International Experience in Congestion Pricing, Final Report.]*

88 *[K.T. Analytics, Inc. August 2008. Lessons Learned from International Experience in Congestion Pricing, Final Report and Transport of London, July 2008, Central London Congestion Charging Impacts Monitoring.]*

Stockholm program's trial period found that these entities developed at the same rate as the rest of the country; the same was true for other retail sectors.[89]

In recognition of the concerns of small businesses on the effects of the Project, the Project Sponsors have committed to establishing a Small Business Working Group (SBWG). If the Project is approved, the purpose of this group will be to share information about implementation of the Project, findings from evaluating the effects of the Project, and to solicit ongoing input on how businesses are being affected. The SBWG would meet six months prior to Project implementation, six months after the implementation, and annually thereafter.

During public outreach, some commenters expressed concern that the new toll would result in higher delivery costs that would be passed on to consumers in the form of higher prices for goods and services in the Manhattan CBD. As noted above, while the new CBD toll would increase the cost of truck deliveries to the Manhattan CBD for some shippers (because of the price of the new toll), it would reduce it for others because of travel time savings, the potential for reduced costs associated with parking tickets, and other potential cost savings.] Incremental toll costs that are passed along to receiving businesses would be passed in a diluted fashion because shippers would allocate the toll costs among the multiple receivers on a journey (within New York City, averaging 5.5 stops per journey).[90] Shippers to small retail stores ***[who make multiple]*** stops would share the toll cost among those multiple receivers. An incremental cost to any one retail store would be passed along as an incremental cost to consumers but would represent a very small component of the retail price charged to the consumer.

As incremental toll costs would be diluted among receivers, the receivers would retain a role as decision-maker for delivery hours, and ***[research indicates that many]*** receivers ***[may]*** prefer regular-hour deliveries because they typically have more staff on hand, as opposed to off-hour deliveries that could require additional staff, security, lighting, and other costs.[91] Therefore, tolling, as well as tolling with peak- and off-peak rate variation, would not likely substantially alter urban freight delivery. Separate research from Stockholm, Sweden about congestion pricing indicates that commercial-vehicle traffic, such as truck traffic, has a higher willingness to pay for decreased travel time and is relatively insensitive to changes in price compared with private passenger-trips.[92] However, the toll rates in Stockholm generally fall well below the toll rates contemplated under the tolling scenarios[93], and therefore with the CBD Tolling Alternative the lower off-peak rates may have a stronger influence on receiver decision-making if a business is incurring additional costs during peak delivery times.

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89 *[Eliasson, Jonas, KTH Royal Institute of Technology, prepared for the Centre for Transport Studies Stockholm, July 2014. The Stockholm Congestion Charges: An Overview.]*

90 Holguin-Veras, Jose, et al. September 2010. *Integrative Freight Demand Management in the New York City Metropolitan Area*. http://www.nyc.gov/html/dot/downloads/pdf/ohd-final-report.pdf.

91 Ibid.

92 Börjesson, Maria. 2018. *Long-Term Effects of the Swedish Congestion Charges*. International Transport Forum. https://www.itf-oecd.org/sites/default/files/docs/swedish-congestion-charges.pdf.

93 Charges for a single entry in Stockholm range from 11 to 45 Swedish Krona (SEK) (approximately $1.14 to $4.66 USD) during peak seasons, and 11 to 35 SEK ($1.14-$3.62 USD) in off-peak seasons. Vehicles are charged for every entry with a maximum toll per day for any vehicle of 135 SEK, or $13.98 USD (during off-peak season, the maximum toll is 105 SEK, or $10.87 USD). All vehicles are subject to the same fee schedule.

With the CBD Tolling Alternative, some trucks with origins and destinations outside the Manhattan CBD that currently pass through the Manhattan CBD enroute to their destinations in the No Action Alternative could choose a different route to avoid the toll with the CBD Tolling Alternative. This routing decision would be based on consideration of the cost of the toll versus the cost of the alternative routing, which could be longer or more time-consuming. These trucks would still reach their destination, using a different route than they do today. *[Based on the tolling scenarios evaluated, which have off-peak and overnight tolls that are between 50 and 75 percent of peak tolls for all vehicles, t]*he BPM projects a reduction in truck trips passing through the Manhattan CBD ranging from approximately 1,700 truck trips in Tolling Scenario G[94] to nearly 6,800 truck trips in Tolling Scenario F compared to the No Action Alternative (**Table 6-32**). While in the No Action Alternative, 25 percent of the trucks entering the Manhattan CBD would not have destinations in the Manhattan CBD and would be passing through*[, i]*n Tolling Scenario F, with the highest tolls, the share would drop to 6 percent. *[Tolling Scenario G, with the lowest overnight toll rate for trucks, would have the smallest diversion of truck trips to areas outside the Manhattan CBD.]*

[For the Final EA, the Project Sponsors have added two new mitigation commitments to incentivize off-peak truck deliveries and reduce the number of trucks that divert around the Manhattan CBD: 1) a commitment to further reduce overnight toll rates; and 2) a commitment to expand NYCDOT's Off-Hours Delivery Program, a pilot program that provides support for businesses that shift their deliveries to off-peak periods.[95] The reduction of overnight toll rates would also benefit some workers and businesses.]

Table 6-32. Change in Daily Through Truck Trips via the Manhattan CBD, No Action Alternative vs. Tolling Scenarios

PARAMETER	NO ACTION	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
Truck Trips Through Manhattan CBD	8,392	3,746	3,424	3,139	2,705	1,788	1,607	6,657
Difference from No Action Alternative	—	-4,645	-4,967	-5,253	-5,687	-6,604	-6,784	-1,734

Source: BPM, WSP 2021.

6.4 NEIGHBORHOOD-LEVEL ASSESSMENT

In addition to the regional effects of the Project discussed in **Section 6.3**, the changes in regional travel patterns resulting from the CBD Tolling Alternative also have the potential to affect localized community and neighborhood economic conditions if travel patterns at transportation hubs (where travelers shift modes) or near the 60th Street Manhattan CBD boundary change in a way that could lead to changes in economic conditions. This section of the chapter evaluates the potential for the Project to result in this type

94 Tolling Scenario G is similar to the Stockholm, Sweden program in that all vehicles are subject to the same fee schedule, resulting in relatively low toll rates for trucks and a greater willingness to absorb (rather than avoid) the cost of tolls.

[95 https://www.nyc.gov/html/dot/downloads/pdf/ssi10-offhour.pdf.]

of localized change and whether such a change could lead to indirect displacement effects and changes in the operations of certain industries.

6.4.1 Study Areas

This section considers whether and where the CBD Tolling Alternative could substantively influence economic conditions at a local level, and thus warrant a neighborhood-level assessment. As detailed below, the identified study areas are locations where the CBD Tolling Alternative could indirectly alter land use and economic patterns within a neighborhood or neighborhoods. This section considers the effects of the CBD Tolling Alternative on transportation hubs, neighborhoods where vehicular traffic would increase or decrease, and the area close to the 60th Street Manhattan CBD boundary in Manhattan.

6.4.1.1 Transportation Hubs

With the CBD Tolling Alternative, certain public transportation hubs would experience an increase in transit ridership as more travelers to and from the Manhattan CBD select to take public transportation rather than personal transportation or taxis/FHVs in order to avoid the toll. The economic consideration at these transportation hubs is whether the increased consumer demand generated by the additional riders could substantively alter market forces in the immediate area of the transportation hubs, leading to a change of uses and neighborhood character. For example, this theoretically could occur if increased spending from new consumers in retail corridors near these public transportation hubs then led to increased property values, which in turn led to increased rents. To the extent that existing businesses would experience an increase in foot traffic or demand such that property values would be meaningfully affected, the resultant increase in rents could be offset by increased sales revenues. However, non-retail uses—or retail uses that do not cater to the new demand—may not benefit from increased sales, which in theory could lead to turnover of businesses.[96]

As detailed in Subchapter 4C, "Transportation: Transit," the shift of some portion of journeys to and from the Manhattan CBD from automobile to transit would result in a relatively small overall change in regional transit ridership of 1 to 3 percent across all transit service types in the region. Outside the key Manhattan CBD transit hubs, where the increase in transit riders would be the most concentrated, the distribution of ridership changes is not expected to introduce additional consumer expenditure potential that could substantively alter real estate market conditions or change retail sales in and around any given transit station in the region. Therefore, the CBD Tolling Alternative does not have the potential to substantively alter market conditions in neighborhoods surrounding transportation hubs, and no further analysis of this concern is warranted.

[96] In addition to this economic effect on businesses, an increase in property values could also affect residences. This type of indirect displacement is discussed in Subchapter 5A, "Social Conditions: Population Characteristics and Community Cohesion," which concludes that the CBD Tolling Alternative would not result in adverse effects related to indirect residential displacement.

6.4.1.2 Neighborhood Streets Experiencing Increases or Decreases in Traffic

The CBD Tolling Alternative would result in an overall net reduction in auto journeys to and from the Manhattan CBD. Depending on the tolling scenario and the specific crossing credits included for other tolls paid at bridges and tunnels, certain local streets are projected to experience increases in vehicle traffic from route diversions. **Subchapter 4B, "Transportation: Highways and Local Intersections,"** provides detail on these locations and presents the results of intersection-level traffic impact analysis. The predicted changes in traffic volumes would be small compared to the overall volume of traffic on city streets during the day. As a result, there would be no anticipated change to the overall operation or character of local streets and no effect on economic conditions.

Increases and decreases in vehicle traffic along road segments resulting from the CBD Tolling Alternative would not substantively alter local market conditions for the following reasons:

- **These locations already experience traffic at levels that influence market conditions.** Areas where traffic volumes would increase already experience high levels of vehicle traffic, and in any case, local market conditions are more heavily influenced by existing pedestrian traffic. Therefore, such changes in traffic would not be expected to alter economic conditions at the neighborhood level. Outside the Manhattan CBD, few roadway segments would experience increases in vehicle traffic exceeding 20 percent over the No Action Alternative under any tolling scenario, and these segments would be primarily on highways such as the Long Island Expressway.
- **Car journeys to commercial businesses represent a small percentage of all consumer journeys in and immediately surrounding the Manhattan CBD.** Based on CTPP data, in general fewer than 10 percent of all journeys made to local businesses in the Manhattan CBD are made by auto. Given that the BPM predicts that the CBD Tolling Alternative would reduce non-work auto journeys to the Manhattan CBD by no more than 13 percent (the highest reduction, under Tolling Scenario D), the reduction in non-work journeys to the Manhattan CBD would be no more than approximately 1.3 percent (i.e., a 13 percent reduction of 10 percent of consumer base). Because some of those auto-based trips would transition to transit, the loss of consumer base is expected to be even less than 1.3 percent.
- **Areas receiving incremental traffic (e.g., roadways near the Queens-Midtown Tunnel and the Hugh L. Carey Tunnel) are largely "pass-through" locations.** A vast majority of automobile travelers are not stopping at these locations and therefore would not add consumer spending to these local areas. The Project-generated shifts in traffic would not be attributed to attractions to/from businesses along routes, but rather they would be in response to the imposed tolling program, resulting in different route choices. Therefore, they would have little or no effect on consumer journeys to any particular business, except for perhaps parking facilities (addressed later in this subchapter).

Based on the above, detailed assessment of potential economic effects along neighborhood streets is not warranted and no adverse effect on economic conditions is anticipated.

6.4.1.3 Neighborhoods Near the 60th Street Manhattan CBD Boundary

The northern boundary of the Manhattan CBD, as defined in the MTA Reform and Traffic Mobility Act, is 60th Street. This assessment considers whether the introduction of tolling for vehicles would result in changes in economic conditions in neighborhoods on either side of the Manhattan CBD boundary because of changes in traffic volumes close to 60th Street.

Neighborhoods immediately north and south of the Manhattan CBD boundary regularly experience high volumes of vehicular and pedestrian traffic such that the incremental volumes generated by the CBD Tolling Alternative would not alter local market conditions in a manner that could adversely affect neighborhood character (see **Subchapter 5B, "Social Conditions: Neighborhood Character,"** for additional discussion). This analysis considers the effects of the CBD Tolling Alternative on the local demand for off-street parking, which is a prominent land use in the vicinity of 60th Street across Manhattan, and whether a change in demand could in turn result in a change in the character of the area.[97] Fewer people may seek parking in the areas just inside the Manhattan CBD, while north of the boundary, there could be new demand for off-street parking, and new parkers could become new consumers as they walk to their destinations south of the Manhattan CBD boundary.

It is predicted that "last-mile" switching from auto to walking trips to avoid the toll cost would not be a rational decision beyond approximately five blocks of the Manhattan CBD boundary.[98] For example, an individual with a 55th Street destination would be far more likely to seek parking just north of the 60th Street Manhattan CBD boundary and walk to their destination compared with an individual who has a destination farther south in the Manhattan CBD. Therefore, to assess the potential economic effects of this change in consumer behavior, a study area encompassing the area from 55th Street to 65th Street for the width of Manhattan was evaluated (**Figure 6-9**).

6.4.2 Affected Environment

The area of Manhattan between 55th and 65th Streets from the Hudson River to the East River is characterized by densely developed neighborhoods with a wide mix of uses and strong, established land

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97 The Project's effects on parking are evaluated in **Subchapter 4D, "Transportation: Parking."** The assessment in this chapter considers the possible changes in land use and local economic conditions related to changes in parking demand. Industrywide, the potential reduction in overall auto journeys to the Manhattan CBD is not predicted to be large enough to result in regional impacts to the off-street parking industry or off-street parking facilities within the Manhattan CBD south of 55th Street, because the reduction of auto trips and associated parking would be dispersed throughout the Manhattan CBD.

98 Rational behavior is the cornerstone of rational choice theory, a theory of economics that assumes that individuals always make decisions that provide them with the highest amount of personal utility. These decisions provide people with the greatest benefit or satisfaction given the choices available. While the value individuals place on their time varies depending on personal socioeconomic factors and circumstance, the value of one hour of personal travel time is usually estimated at 25 to 50 percent of earnings, while the value placed on business travel time can exceed 100 percent of earnings (https://www.transportation.gov/sites/dot.gov/files/docs/2016%20Revised%20Value%20of%20Travel%20Time%20Guidance.pdf). For purposes of this analysis, it is assumed that the toll cost is roughly equivalent to one hour of a person's time. Given this assumption, it would be a rational choice for individuals to park north of the 60th Street Manhattan CBD boundary to avoid the toll if the time spent on this "toll avoidance measure" were less than one hour, which when considering walking times roughly equates to an area from 55th to 65th Streets.

use trends. The Manhattan CBD boundary comprises heavy vehicular and pedestrian traffic, with access to multiple subway and bus routes and high transit usage. There are also numerous parking garages.

North of 60th Street, the areas east of Central Park (part of the Upper East Side) and west of Central Park (part of the Upper West Side) are both high-density neighborhoods characterized by residential uses, including rowhouses, mid- and high-rise apartment buildings, and residential skyscrapers. The economic and employment characters of this area include prominent large institutional uses as well as neighborhood commercial corridors along most north–south avenues. The key characteristics of these areas are the combination of high residential density development, congested vehicular and pedestrian traffic conditions, and a mix of office, residential, retail, institutional, and open space uses.

The area south of 60th Street, part of the Manhattan CBD and the northern part of Midtown Manhattan, is a high-density district characterized by a mix of uses, including commercial and residential skyscrapers, retail districts, and large cultural and institutional facilities (**Figure 6-9**). The areas of Midtown east of Second Avenue and west of Eighth Avenue are much more residential in character, but still very densely developed with rowhouses and mid- and high-rise apartment buildings. There is high pedestrian traffic throughout the day, and heavy vehicular traffic on all north–south roadways, along 57th Street and Central Park South, on the West Side Highway/Route 9A and Franklin D. Roosevelt Drive, and near the entrances and exits to the Ed Koch Queensboro Bridge. The high pedestrian and vehicular traffic and mix of commercial office, residential, and retail uses are key characteristics of the area immediately south of 60th Street.

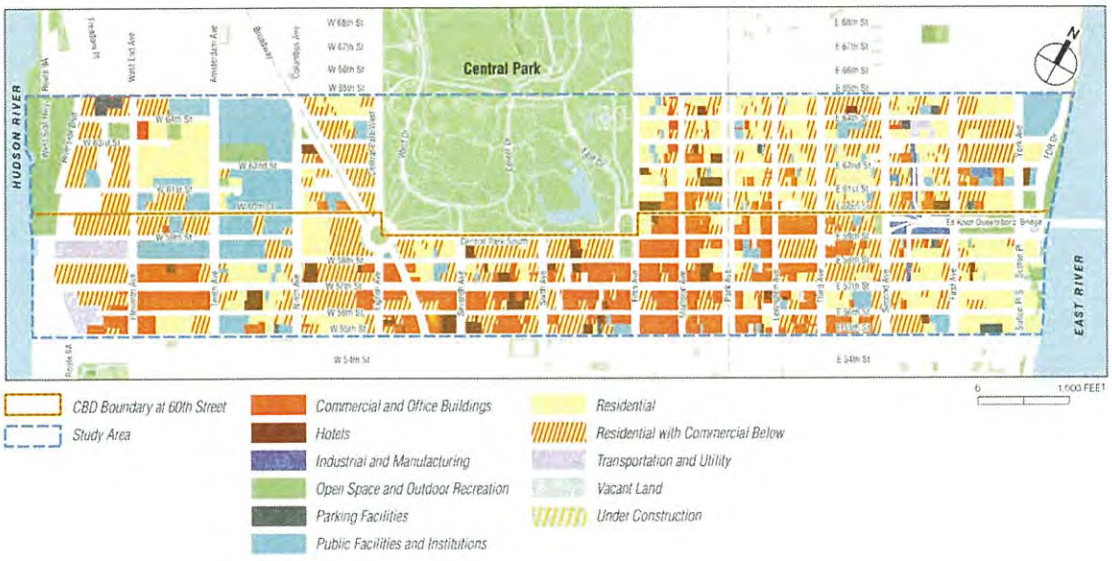
As noted above, neighborhoods immediately north and south of the 60th Street Manhattan CBD boundary regularly experience high volumes of vehicular and pedestrian traffic such that the incremental volumes generated by the CBD Tolling Alternative would not alter local market conditions in a manner that could adversely affect neighborhood character. The BPM projections do not suggest that there would be substantial increases in parking demand immediately north of the 60th Street Manhattan CBD boundary from auto users; the number of cars on each of the avenues immediately north of 60th Street is projected to decrease under all tolling scenarios. In addition, literature research of congestion-based pricing programs in London, England, and Stockholm, Sweden, did not identify adverse effects related to increased parking demand immediately outside of tolling cordons. Nevertheless, this assessment considers potential economic effects if the CBD Tolling Alternative were to increase demand for off-street parking at some locations north of 60th Street, even with a decrease in the overall number of cars. Between 60th and 65th Streets (north of the 60th Street Manhattan CBD boundary), there are approximately 7,525 off-street parking spaces in 52 parking facilities (**Figure 6-10** and **Table 6-33**). If the area were to experience an increase in parking demand, it is expected that incremental demand would be satisfied through available capacity,[99] or if there were capacity constraints, through upward adjustments in parking fees. Changes in parking rates could also affect area residents that use off-street parking facilities. Parking fee adjustments

[99] Based on a sampling of parking utilization collected in 2018 and 2019 during typical conditions for environmental review studies, weekday midday off-street parking utilization ranges from approximately 70 to 80 percent of capacity, with lower utilization rates in the AM and PM peak periods. Applying this utilization estimate to the total off-street parking capacity between 60th and 65th Streets (7,525 spaces) equates to between 1,505 and 2,258 available off-street parking spaces.

north of 60th Street, combined with potential parking fee reductions south of 60th Street due to potential reductions in demand, would offset potential changes in consumer demand behaviors resulting from the CBD Tolling Alternative. Even if such behavior were not fully offset through rate adjustments, there would not be changes in land use patterns; the trend toward lower parking demand combined with high real estate values in this area suggests that new parking garages would not be developed.

In areas immediately south of 60th Street, the CBD Tolling Alternative could reduce local demand for off-street parking, which is a prominent land use in the area. Between 60th and 55th Streets (south of the 60th Street Manhattan CBD boundary), there are approximately 11,500 off-street parking spaces in 88 parking facilities (**Figure 6-11** and **Table 6-33**). This analysis considers whether parking garages immediately south of 60th Street could experience reduced demand at a level that could lead to displacement of off-street parking facilities, and a resulting change in neighborhood character.

Figure 6-9. Land Use Near the 60th Street Manhattan CBD Boundary

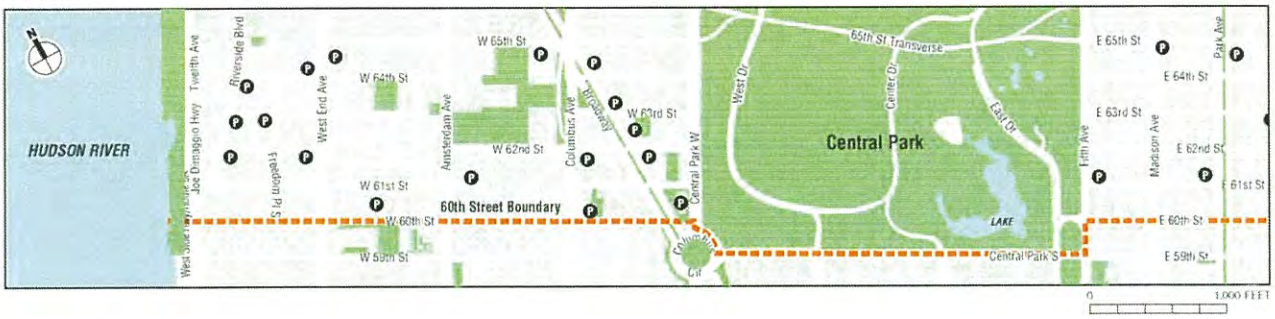


Sources: New York City Department of City Planning, BYTES of the BIG APPLE, https://www1.nyc.gov/site/planning/data-maps/open-data.page.
ArcGIS Online, https://www.arcgis.com/index.html.

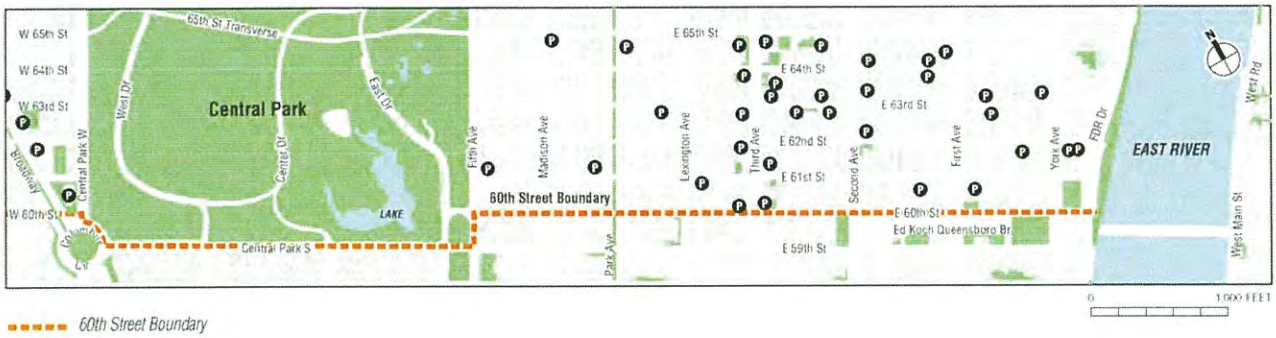
[Note: For an audio description, please go to the following link: https://www.youtube.com/watch?v=WexVu8QgX1o&list=PLZHkn7882QJPEY5zv-dr2gzkzMQFMgb_2&index=7.]

Figure 6-10. Off-Street Parking Facilities between 60th and 65th Streets North of the 60th Street Manhattan CBD Boundary

Western Portion



Eastern Portion



60th Street Boundary

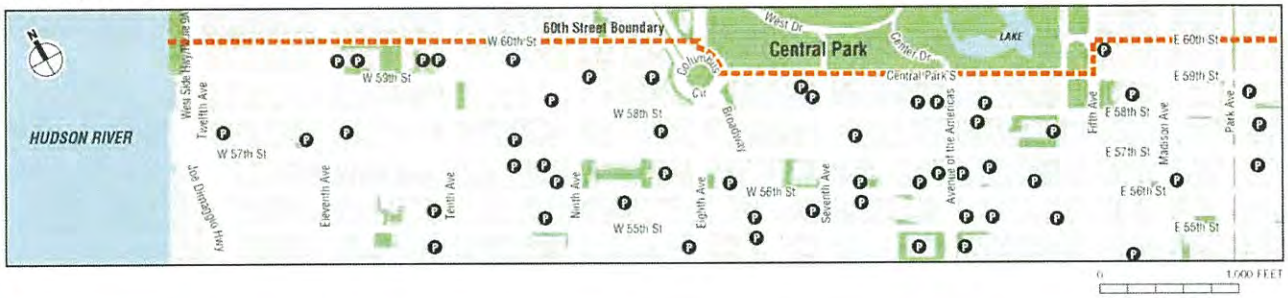
Off-Street Parking Facility

Park or Recreational Resource

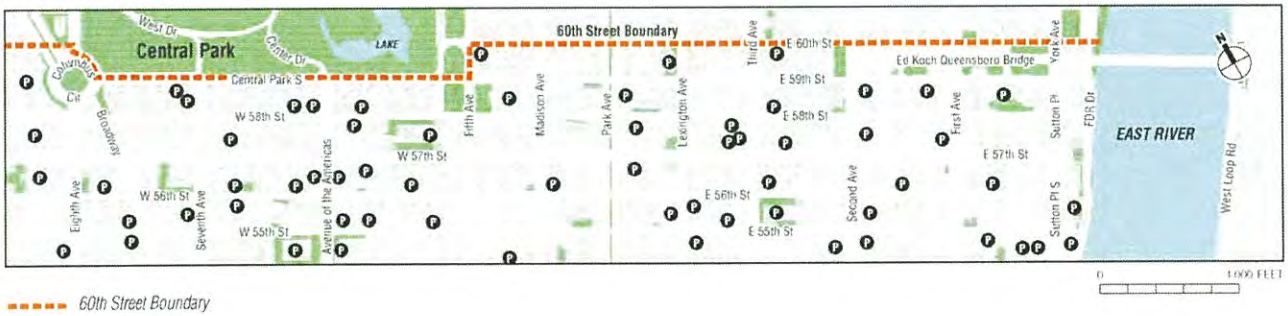
Source: Parking facility locational data obtained from the New York City Department of Information Technology & Telecommunications NYCityMap program.

Figure 6-11. Off-Street Parking Facilities between 60th and 55th Streets South of the 60th Street Manhattan CBD Boundary

Western Portion



Eastern Portion



60th Street Boundary

Off-Street Parking Facility

Park or Recreational Resource

Source: Parking facility locational data obtained from the New York City Department of Information Technology & Telecommunications NYCityMap program.

Table 6-33. Parking Garages between 55th and 65th Streets

AREA	BOUNDARIES	PARKING GARAGES	PARKING SPACES
Outside the Manhattan CBD: North of 60th Street (60th to 65th Streets)		52	7,525
Lenox Hill	East 60th Street to East 65th Street/Franklin D. Roosevelt Drive to Third Avenue	23	2,834
Upper East Side	East 60th Street to East 65th Street/Third Avenue to Fifth Avenue	11	1,031
Lincoln Square	West 60th Street to West 65th Street/Central Park West to Twelfth Avenue	18	3,660
Inside the Manhattan CBD: South of 60th Street (60th to 55th Street)		88	11,541
East Midtown	East 55th Street to East 60th Street/Franklin D. Roosevelt Drive to Park Avenue	31	4,198
Midtown	59th Street to 55th Street/Park Avenue to Eighth Avenue	36	3,202
Clinton	West 60th Street to West 55th Street/Eighth Avenue to Twelfth Avenue	21	4,141
	TOTAL (55th to 65th Streets)	140	19,066

Sources: New York City Department of Consumer Affairs data obtained from the New York City Department of Information Technology & Telecommunications NYCityMap program; data for areas inside of 60th Street Manhattan CBD boundary field verified by AKRF in October 2019.

6.4.3 Environmental Consequences

6.4.3.1 No Action Alternative

The No Action Alternative would not implement a vehicular tolling program. It would not affect population, travel patterns, access to employment, or neighborhood economic conditions in the 2023 analysis year. Market conditions at the neighborhood level would not markedly change.

6.4.3.2 CBD Tolling Alternative

This section describes the potential effects of the CBD Tolling Alternative on economic conditions at the neighborhood level. The analysis considers whether additional consumers and/or changes in consumer demand could alter underlying real estate market forces at the neighborhood level, specifically focusing on off-street parking uses and demand.

As shown in **Table 6-34**, under the various tolling scenarios there could be as much as a 10.5 percent reduction in total auto journeys to the Manhattan CBD as compared to the No Action Alternative, which in absolute terms is an estimated 40,906 autos. This is auto journeys from all locations crossing into the Manhattan CBD (60th Street, Hudson River, Brooklyn, and Queens); only a portion of this reduction would occur in journeys coming from the north. However, a conservative estimate of the reduction in demand for parking immediately south of 60th Street was made using the BPM zonal information. This information indicates about 4.5 percent of auto journeys to the Manhattan CBD are bound for the traffic analysis zones just south of 60th Street. Applying this percentage to the largest reduction shown in **Table 6-34** (Tolling Scenario E, with 40,906 fewer vehicles) would reduce potential parking demand in the area immediately south of 60th Street by about 1,840 vehicles per day, which represents approximately 16 percent of the

estimated 11,500 parking spaces located across Manhattan between 55th and 60th Streets.[100] Reduction in parking demand of this volume could jeopardize the viability of one or more parking facilities in the area south of 60th Street. However, given property values and consumer volumes at the northern border of the Manhattan CBD in the area south of 60th Street, if one or more parking facilities were to close, these facilities could be redeveloped or repurposed with other uses; the sites would not remain vacant; therefore, their potential displacement would not create a climate of disinvestment that could lead to adverse effects on neighborhood character.

Table 6-34. Change in Auto Journeys to the Manhattan CBD vs. No Action Alternative

CHANGE IN JOURNEYS	SCENARIO A	SCENARIO B	SCENARIO C	SCENARIO D	SCENARIO E	SCENARIO F	SCENARIO G
Absolute Change	-20,742	-16,173	-25,559	-38,744	-40,906	-31,784	-23,056
Percentage Change	-5.3%	-4.2%	-6.6%	-10.0%	-10.5%	-8.2%	-5.9%

Source: BPM, WSP 2021.

Overall, therefore, changes in traffic patterns predicted as a result of the CBD Tolling Alternative would not alter overall economic activity or conditions in any areas that could see a decrease or increase in traffic on local streets.

6.5 CONCLUSION

Through congestion relief, the CBD Tolling Alternative would provide an economic benefit to the Manhattan CBD, and thus to the region and nation. Most transportation users in the region making journeys to or within the Manhattan CBD by auto, FHV/taxi, bus, or truck would benefit from travel-time savings and travel-time reliability improvements, which are economic benefits because they increase a person's productivity and overall utility by reducing time spent on less productive activities (i.e., traveling to a destination). With fewer vehicular trips entering and exiting the Manhattan CBD, the CBD Tolling Alternative would also reduce vehicle-vehicle and vehicle-pedestrian conflicts, leading to an overall benefit to safety. In addition, the CBD Tolling Alternative would decrease regional VMT relative to the No Action Alternative, which could lead to vehicle operating cost savings for drivers and businesses. Overall, economic benefits to sustaining the economic vitality of New York City as well as benefits to drivers and transit riders are anticipated because of the proposed CBD Tolling Alternative, which would provide for congestion relief in the Manhattan CBD as well as secure funding to sustain capital investment in the regional transit system.

The economic analysis also considers the potential for adverse economic effects resulting from increased commuting costs, increased taxi/FHV fares, and increased delivery costs that could result from the CBD Tolling Alternative on businesses and employees in the Manhattan CBD. The analysis finds that increased auto commuting costs under the CBD Tolling Alternative would not adversely affect any particular industry or occupational category in the Manhattan CBD. Given the highly transit-accessible nature of the

[100] In addition to assuming the largest auto reduction of autos from the tolling scenarios, this analysis conservatively assumes that all auto trips bound for the traffic analysis zones just south of 60th Street are seeking off-street parking, when some of those trips currently secure on-street parking.

Manhattan CBD, the Project's toll on auto commuters would directly affect a relatively small percentage of the overall workforce.

Census data indicates that in the aggregate, there are no industry or occupational categories within the Manhattan CBD for which commuters have a greater propensity or need to commute by auto. Approximately 99 percent of Manhattan CBD workers—and approximately 99 percent of the subset who commute from outside the Manhattan CBD—work within one-half mile of a subway station or SBS stop within the Manhattan CBD. While there are higher rates of auto commuting for specific industries and occupations within certain locations in the Manhattan CBD, the total numbers of employees working at those locations do not constitute a substantial percentage of the total workforce for any industry or occupation within the Manhattan CBD or broader regional study area. The tendency for these workers to commute by auto appears related more to distance from transit and/or availability of free parking than to needs of their occupations or industries.

The analysis finds that costs could increase for drivers and delivery costs could increase if delivery companies pass on the toll cost to customers. Taxis would be most affected by CBD tolling, because 75 percent of taxi trips start or end in the Manhattan CBD. FHVs rely less on trips in the Manhattan CBD, because only about 38 percent of "high-volume" FHV trips start or end in the Manhattan CBD. Taxi and FHV fares may increase under tolling scenarios that toll taxis and/or FHVs more than once a day and there could be reductions in demand and corresponding reductions in employment within the industry. The potential reductions in revenue and employment would not be of an amount that could jeopardize the overall viability of the taxi/FHV industry within the region. Overall, these increased costs would not adversely affect the operations of businesses in the Manhattan CBD, its ability to attract employees, and the viability of the taxi and FHV industry. There is already a high cost associated with locating in or travel to the Manhattan CBD, and the toll cost would not meaningfully change the competitiveness or attractiveness of doing business in the Manhattan CBD. ***[Moreover, the Project Sponsors have committed to tolls of no more than once per day for taxis or FHVs, which will further reduce the potential effects on the taxi and FHV industry.]***

The analysis indicates no adverse changes to commercial traffic providing goods and services to the Manhattan CBD. Because incremental toll costs would not be borne by many customers or would be diluted among many customers, the incremental cost would not be expected to jeopardize the viability of the freight industry or the many industries that rely on freight services. ***[For the Final EA, the Project Sponsors have added two new mitigation commitments to incentivize off-peak truck deliveries and reduce the number of trucks that divert around the Manhattan CBD: 1) a commitment to further reduce overnight toll rates; and 2) a commitment to expand NYCDOT's Off-Hours Delivery Program, a pilot program that provides support for businesses that shift their deliveries to off-peak periods.]***

The neighborhoods near the 60th Street boundary of the Manhattan CBD would experience changes in travel patterns as a result of the CBD Tolling Alternative. This analysis considers whether those changes could substantially affect the economic characteristics of these neighborhoods, and in particular, off-street parking facilities located there. Neighborhoods immediately north and south of the 60th Street Manhattan CBD boundary regularly experience high volumes of vehicular and pedestrian traffic such that the

incremental volumes generated by the CBD Tolling Alternative would not alter local market conditions in a manner that could adversely affect neighborhood character. Reduction in parking demand from the CBD Tolling Alternative could jeopardize the viability of one or more parking facilities in the area south of 60th Street. However, given property values and consumer volumes at the northern border of the Manhattan CBD in the area south of 60th Street, if one or more parking facilities were to close, these facilities could be redeveloped or repurposed with other uses; the sites would not remain vacant, and therefore their potential displacement would not create a climate of disinvestment that could lead to adverse effects on neighborhood character. Overall, therefore, changes in traffic patterns predicted as a result of the CBD Tolling Alternative (for all tolling scenarios) would not alter overall economic activity or conditions in any areas that could see a decrease or increase in traffic on local streets.

Table 6-35 provides a summary of the conclusions of this chapter *[and Table 6-36 summarizes how enhancement measures will be implemented by the Project Sponsors]*.

Table 6-35. Summary of Effects of the CBD Tolling Alternative on Economic Conditions

TOPIC	SUMMARY OF EFFECTS	EFFECT BY TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
		A	B	C	D	E	F	G		
Benefits	Regional economic benefits	Economic benefit through congestion relief in terms of travel-time savings and travel-time reliability improvements, which would increase productivity and utility, as well as safety improvements and reduced vehicle operating costs associated with reductions in congestion.							No	No mitigation needed. Beneficial effects
Economic Effects of Toll Costs	Cost of new toll for workers and businesses in the CBD that rely on vehicles	No adverse effects to any particular industry or occupational category in the Manhattan CBD. Given the high level of transit access in the CBD and high percentage of transit share, the toll would affect only a small percentage of the overall workforce. This would not adversely affect operations of businesses in the Manhattan CBD or the viability of any business types, including the taxi/FHV industry.							No	No mitigation needed. No adverse effects
Price of Goods	Cost of new toll would not result in changes in the cost of most consumer goods in the Manhattan CBD	Unlikely to result in meaningful change in cost for most consumer goods. Any cost increase associated with the new toll in the CBD Tolling Alternative that would be passed along to receiving businesses would be distributed among several customers per toll charge (since trucks make multiple deliveries) especially for businesses, including small businesses and micro-businesses, receiving smaller deliveries. This would minimize the cost to any individual business. Some commodity sectors (construction materials, electronics, beverages) are more prone to increases due to less competition within delivery market.							No	No mitigation needed. No adverse effects [ew in the inal EA Enhancement The ro ect ponsors commit to establishing a mall Business or ing Group that will meet si months prior and si months after ro ect implementation and annually thereafter to solicit ongoing input on how businesses are being affected As part of mitigation for other topics TBTA will ensure the overnight toll for truc s and other vehicles is reduced to at or below 0 percent of the pea toll from at least 2 00 a m to 00 a m in the final CB toll structure this will also benefit some wor ers and businesses]

TOPIC	SUMMARY OF EFFECTS	EFFECT BY TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
		A	B	C	D	E	F	G		
		Net change in taxi/FHV VMT vs. No Action Alternative								
Taxi and FHV Industry	Depending on the tolling scenario, the toll could reduce taxi and FHV revenues. While this could adversely affect individual drivers, the industry would remain viable overall.	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	No	No mitigation needed. No adverse effects (see Chapter 17, "Environmental Justice," for mitigation related to effects on taxi and FHV drivers)
Local Economic Effects	Changes in parking demand near the 60th Street CBD boundary	Changes in parking demand near the 60th Street Manhattan CBD boundary (including increases just north of 60th Street and decreases just to the south) could jeopardize the viability of one or more parking facilities in the area south of 60th Street but would not create a climate of disinvestment that could lead to adverse effects on neighborhood character.							No	No mitigation needed. No adverse effects

[Table 6-36. Summary of the CBD Tolling Alternative Implementation Approach for Enhancement Measures for Economic Conditions]

RELEVANT LOCATION(S)	DESCRIPTION OF ENHANCEMENT	TIMELINE FOR PRE- AND POST-PROJECT IMPLEMENTATION DATA COLLECTION FOR SPECIFIC MEASURES	THRESHOLD FOR DETERMINING WHEN NEXT STEP(S) WILL BE IMPLEMENTED	TIMING FOR SPECIFIC MEASURES	LEAD AGENCY
Manhattan CBD	New in Final EA: The Project Sponsors commit to establishing a Small Business Working Group (SBWG) that will meet six months prior and six months after Project implementation, and annually thereafter, to solicit ongoing input on how businesses are being affected.	N/A – No early monitoring required; implemented under any adopted tolling structure.	N/A – No threshold required; implemented under any adopted tolling structure.	Membership will be confirmed six months prior to Project implementation, with the first meeting taking place prior to implementation, the second meeting within the six months after implementation, and meetings annually thereafter.	TBTA will lead, in partnership with NYSDOT and NYCDOT.
Multiple throughout the environmental justice study area	New in Final EA: As part of mitigation for other topics, TBTA will ensure that the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final structure; this will also benefit some workers and businesses.	N/A – No early monitoring required; measures implemented under any adopted tolling structure.	N/A – No threshold required; implemented under any adopted tolling structure.	Concurrent with Project Implementation.	TBTA will lead.

7. Parks and Recreational Resources

7.1 INTRODUCTION

This chapter evaluates the potential effects of implementing the CBD Tolling Alternative on parks and recreational resources. Effects on publicly accessible open spaces, including parks and recreational areas, can result from physical changes in a park or recreation area, such as changes in the size and programming of, or access to an open space. In addition, changes in the enjoyment or usage of open spaces resulting from the introduction of substantial new shadows, noxious odors, or increased noise or air pollutant emissions that would affect its usefulness, whether on a permanent or temporary basis, are also considered effects to publicly accessible open spaces. This chapter also considers the Project's consistency with Federal laws that limit the incorporation of parkland and recreational resources into a transportation project or conversion of parkland to nonpark use — Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966, Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) of 1965 (54 United States Code (USC) Section 200301 et seq.), and Section 1010 of the Urban Park and Recreation Recovery Act (UPARRA) of 1978 (16 USC Section 2501–2514).

7.2 AFFECTED ENVIRONMENT

7.2.1 Inventory of Publicly Accessible Open Space in the Parks Study Area

The parks study area consists of the proposed locations of tolling infrastructure and tolling system equipment and includes parks and recreational resources that are immediately adjacent to or directly across the street from proposed tolling infrastructure and tolling equipment. **Table 7-1** lists and **Figures 7-1a through 7-1g** show the publicly accessible open spaces in the parks study area.

These publicly accessible open spaces include small sitting areas in the median of Broadway, urban parks such as DeWitt Clinton Park, linear parks (e.g., Hudson River Park, East River Park, and the High Line), and the 840-acre Central Park. Most of the listed parks are under the jurisdiction of NYC Parks; some are managed by other public entities, such as the Hudson River Park Trust and New York City Economic Development Corporation. Privately owned public spaces (POPS) are also included in the list. POPS are spaces dedicated to public use and enjoyment, such as landscaped plazas or pocket parks that are owned and maintained by private property owners in exchange for the right to build larger developments.[1]

NYC Parks and other public agencies are engaged in several ongoing and recently completed projects to rebuild existing parks and construct new parks in the parks study area. Some of the most substantial projects that are likely to be completed by the Project's analysis year of 2023 include the following:

- Reconstruction of Honey Locust Park
- East River Esplanade Expansion: East Midtown Greenway and renovation of Andrew Haswell Green Park

[1] https://www1.nyc.gov/site/planning/plans/pops/pops.page.

- Reconstruction of St. Vartan Park
- Construction of new park at Pier 42 in the East River (between Gouverneur Slip and Jackson Street)
- Reconstruction of Mannahatta Park
- Reconstruction of Vietnam Veterans Plaza
- Construction of Pier 26 Science Play Area and rehabilitation of Pier 57 in Hudson River Park

In addition to these projects, several parks in the parks study area will be partially reconstructed as part of the East Side Coastal Resiliency Project, a coastal protection initiative on Manhattan's East Side from Montgomery Street to East 25th Street that is aimed at reducing flood risk caused by coastal storms and sea level rise. Parks within the parks study area that are part of the East Side Coastal Resiliency Project include Asser Levy Playground, Stuyvesant Cove Park, Murphy Brothers Playground, Captain Patrick J. Brown Walk, East River Park, and Corlears Hook Park. In addition, Pier 42 is immediately adjacent to the area affected by the East Side Coastal Resiliency Project.

Construction on the East Side Coastal Resiliency Project began in January 2021 and will continue in stages through 2025; work affecting some parks in the parks study area is likely to be complete by the Project's analysis year of 2023, while other parks will remain under construction at that time.

The CBD Tolling Alternative would locate tolling infrastructure and tolling system equipment within Central Park and on the underside of the High Line, and the effects of the Project on these parks is described in **Section 7.3.2**. The following sections provide background information on these parks.

7.2.2 Central Park

Central Park is at the northern boundary of the proposed Project, and tolling infrastructure and tolling system equipment are proposed at three detection locations, four poles in total, inside the park and two locations along its edges. **Section 7.3.2.2** describes the proposed infrastructure and equipment and its effects on the park. A general description of Central Park follows to provide context for that analysis.

Central Park is an 840-acre park bounded by Central Park South (59th Street), Fifth Avenue, Central Park North (110th Street), and Central Park West (Eighth Avenue), and the sidewalks abutting the sides of the park outside the park's walls are also under NYC Parks control. The park is managed by NYC Parks with maintenance support provided by Central Park Conservancy—a private, not-for-profit organization that raises money for the park's operating budget and manages the park under a contract with the City of New York—pursuant to a license agreement.[2] Central Park is the largest NYC Parks property in Manhattan and the fifth largest in New York City.[3] Central Park is open to the public from 6:00 a.m. to 1:00 a.m. daily.

[2] http://www.centralparknyc.org/about/.
[3] https://www.nycgovparks.org/about/faq.

Table 7-1. Publicly Accessible Open Spaces in the Parks Study Area

MAP ID	OPEN SPACE	LOCATION	OWNERSHIP	SIZE (ACRES)	DESCRIPTION
1	Riverside Park South	Riverside Boulevard between West 59th Street and West 72nd Street	NYC Parks	66.7	Waterfront park with landscaping, seating, soccer fields, and court space
2	Waterline Square	West 60th Street between Freedom Place South and Riverside Boulevard	Private (POPS)	2.6	Landscaped park with seating, a playground, and an interactive fountain
3	P.S. 452 playground	210 West 61st Street	DOE	0.6	Paved schoolyard with play equipment
4	The Regent Plaza	45 West 60th Street	Private (POPS)	0.1	Plaza with landscaping and seating areas
5	Broadway Malls	Broadway from West 59th Street to West 168th Street	NYC Parks	5.6	Landscaped medians of Broadway, with benches and pedestrian refuges at crosswalks, subway entrances at Columbus Circle, 72nd, and 96th Streets
6	Trump International Hotel Plaza	1 Central Park West	Private (POPS)	0.4	Plaza with landscaping and seating areas, Columbus Circle subway entrance
7	Columbus Circle	Broadway and Central Park South	NYC Parks	0.8	Circular plaza with landscaping, seating, water feature, and central monument to Christopher Columbus
8	Central Park	Fifth Avenue to Eighth Avenue, 59th Street to 110th Street	NYC Parks	840	Regional park with landscaping, seating, active and passive recreation areas
9	Grand Army Plaza	Fifth Avenue and Central Park South	NYC Parks	0.6	Circular plaza that forms the gateway to Central Park with landscaping, seating, statue, and fountain
10	Savoy Plaza	200 East 61st Street	Private (POPS)	0.1	Plaza with landscaping and seating areas
11	Tramway Plaza	Second Avenue between East 59th Street and East 60th Street	NYC Parks	0.5	Paved area with seating, trees, and landscaping adjacent to the Roosevelt Island Tram
12	Evansview Plaza	303 East 60th Street	Private (POPS)	0.1	Plaza with landscaping and seating areas
13	Landmark Plaza	300 East 59th Street	Private (POPS)	0.3	Plaza with landscaping and seating areas
14	Honey Locust Park	1130 Second Avenue	NYC Parks	0.3	Paved area with trees beside Ed Koch Queensboro Bridge
15	Bridge Tower Place Plaza	First Avenue and East 60th Street	Private (POPS)	0.2	Plaza with landscaping and seating
16	Bridgemarket Public Plaza	East 59th Street between First and York Avenues	NYCDOT/EDC	0.2	Plaza with landscaping and seating areas; public garden with monument (Evangeline Blashfield Fountain)
17	Queensboro Oval	York Avenue between East 59th and East 60th Streets	NYC Parks	1.2	Indoor tennis facility beneath Ed Koch Queensboro Bridge
18	Twenty-Four Sycamores Park	501 East 60th Street	NYC Parks	0.6	Neighborhood park with landscaping, seating, playground, and court space
19	Andrew Haswell Green Park	FDR Drive and East 60th Street	NYC Parks	2.0	Waterfront park with landscaping, seating, and dog-friendly areas

MAP ID	OPEN SPACE	LOCATION	OWNERSHIP	SIZE (ACRES)	DESCRIPTION
20	Sutton Place Park	East 57th Street and Sutton Place	NYC Parks	0.3	Neighborhood park with landscaping and seating areas
21	Sutton Parks	25 Sutton Place South	NYC Parks	0.9	Neighborhood park with landscaping and seating areas
22	Peter Detmold Park	454 East 51st Street	NYC Parks	0.6	Neighborhood park with landscaping and seating areas, and dog run
23	MacArthur Playground	436 East 49th Street	NYC Parks	0.3	Neighborhood playground
24	Robert Moses Playground	East 42nd Street and First Avenue	NYC Parks	1.1	Neighborhood playground with court space and synthetic turf field
25	East River Esplanade-Midtown Section	East River and East 37th Street	NYC Parks	1.7	Waterfront esplanade with landscaping, seating, active and passive recreation areas
26	The Corinthian Plaza	330 East 38th Street	Private (POPS)	0.6	Plaza with landscaping and seating areas
27	St. Vartan Park	613 First Avenue	NYC Parks	2.8	Neighborhood park with garden, courts space, synthetic turf field, seating, and playground space
28	Manhattan Place plaza	630 First Avenue	Private (POPS)	0.2	Plaza with landscaping and seating areas
29	American Copper Buildings plaza	626 First Avenue	Private (POPS)	0.5	Plaza with landscaping and seating areas
30	Alexandria Science Center plaza	450 East 29th Street	Private (POPS)	0.8	Plaza with landscaping and seating areas
31	Bellevue Sobriety Garden	East 26th Street and FDR Drive	Private - Bellevue Hospital	0.3	Publicly accessible landscaped garden at Bellevue Hospital
32	Asser Levy Playground	501 East 23rd Street	NYC Parks	2.4	Neighborhood playground with court space, pools, fitness areas, recreation center, and a running track
33	Stuyvesant Cove Park	East River waterfront, from East 18th Street to East 23rd Street	NYC Parks	1.9	Neighborhood park with landscaping, an esplanade, bikeway, paths, seating, and the Solar One community facility
34	Murphy Brothers Playground	292 Avenue C	NYC Parks	1.3	Neighborhood playground with court space and baseball fields
35	Captain Patrick J. Brown Walk	East River waterfront, from East 13th Street to East 18th Street	NYC Parks	1.0	Walkway/bikeway along the East River connecting Stuyvesant Cove Park and John V. Lindsay East River Park, built alongside the FDR Drive
36	John V. Lindsay East River Park	East River waterfront, from Jackson Street to East 13th Street	NYC Parks	45.9	Regional waterfront park with landscaping, seating, active and passive recreation areas, and an amphitheater
37	P.S. 142 playground	100 Attorney Street	DOE	0.6	Paved schoolyard with sports facilities and play equipment
38	Luther Gulick Park	21 Columbia Street	NYC Parks	1.5	Neighborhood park with seating, courts, fitness areas, and playground space

MAP ID	OPEN SPACE	LOCATION	OWNERSHIP	SIZE (ACRES)	DESCRIPTION
39	Corlears Hook Park	397 FDR Drive	NYC Parks	4.4	Neighborhood park with playground, seating, dog run, batting cages, and a baseball field
40	Pier 42	East River waterfront at Jackson Street	NYC Parks/EDC	7.8	Neighborhood park
41	P.S. 184M playground	327 Cherry Street	DOE	1.1	Paved schoolyard with sports facilities and play equipment
42	East River Esplanade-Lower Manhattan Section	East River waterfront between Broad and Jefferson Streets	NYC Parks	8.8	Waterfront esplanade with landscaping, seating, active and passive recreation areas
43	Forsyth Plaza	Forsyth Street and Canal Street	NYCDOT	0.1	Plaza with landscaping and seating areas
44	Sophie Irene Loeb Playground	10 Market Street	NYC Parks	0.1	Park with playground space, located under the Manhattan Bridge
45	Coleman Playground	Intersection of Cherry Street, Pike Street, and Monroe Street	NYC Parks	2.6	Neighborhood park with skate park, dog run, playground, field, and court space
46	Murray Bergtraum softball field	Market Slip between Cherry and South Streets	DOE	2.9	Softball field and running track
47	Catherine Slip Malls	Catherine Slip between Cherry and South Streets	NYC Parks	0.3	Plaza with landscaping and seating
48	City Hall Park	Broadway, Chambers Street, Centre Street, and Park Row	NYC Parks	8.8	Landscaped park with pathways and seating
49	Drumgoole Plaza	Frankfort Street and Gold Street	NYC Parks/ NYCDOT	0.4	Plaza with landscaping and seating areas
50	Verizon Building plaza	375 Pearl Street	Private (POPS)	0.1	Plaza with landscaping and seating areas
51	Fishbridge Park Garden and Dog Run	Pearl Street and Dover Street	NYC Parks	0.1	Community garden and dog run
52	Peck Slip Plaza	Peck Slip and FDR Drive	NYC Parks	0.2	Plaza with landscaping and seating
53	Imagination Playground	89 South Street	NYC Parks	0.4	Neighborhood playground
54	Mannahatta Park	Wall Street between Front and South Streets	NYC Parks	0.4	Plaza with landscaping and seating
55	Financial Square plaza	South Street between Old Slip and Gouverneur Lane	Private (POPS)	0.1	Plaza with landscaping and seating areas
56	55 Water Street plaza	55 Water Street	Private (POPS)	0.8	Elevated plaza with landscaping and seating areas
57	Vietnam Veterans Plaza	24 South Street	NYC Parks	0.7	Plaza with landscaping and stepped seating
58	125 Broad Street plaza	125 Broad Street	Private (POPS)	0.2	Plaza with landscaping and seating areas

MAP ID	OPEN SPACE	LOCATION	OWNERSHIP	SIZE (ACRES)	DESCRIPTION
59	Battery Park (also known as "Battery" or "The Battery")	State Street and Battery Place	NYC Parks/ The Battery Conservancy	21.9	Regional waterfront park with landscaping, seating, water features, and playground space
60	17 Battery Place Plaza	17 Battery Place	Private (POPS)	0.3	Plaza with landscaping and seating areas
61	Elizabeth H. Berger Plaza	Edgar Street, Greenwich Street and Trinity Place	NYC Parks	0.1	Plaza with landscaping, seating areas, and subway entrance
62	Battery Park City Parks	Throughout Battery Park City neighborhood	BPCA	28.4	Series of open spaces throughout the Battery Park City neighborhood including a waterfront esplanade, lawns, neighborhood pocket parks and playgrounds, and athletic fields
63	50 West Street plaza	50 West Street	Private (POPS)	0.1	Plaza with landscaping and seating areas
64	Liberty Park	Liberty, West, Cedar, and Greenwich Streets	PANYNJ	1.0	Elevated park with landscaping and seating areas located at the World Trade Center site
65	9/11 Memorial	West, Liberty, Greenwich, and Fulton Streets	PANYNJ	8.0	Memorial space at the World Trade Center site with landscaping, seating areas, and spaces for reflection and contemplation
66	101 Barclay Street plaza	101 Barclay Street	Private (POPS)	0.2	Paved plaza
67	One Eleven Murray plaza	111 Murray Street	Private (POPS)	0.3	Plaza with landscaping and seating areas
68	Washington Market Park	199 Chambers Street	NYC Parks	2.2	Neighborhood park with landscaping, seating, court space, and playground space
69	Salomon Smith Barney plaza	388 Greenwich Street	Private (POPS)	0.7	Plaza with landscaping and seating areas
70	Tribeca Park	8 Beach Street	NYC Parks	0.3	Plaza with landscaping and seating
71	Albert Capsouto Park	68 Varick Street	NYC Parks	0.4	Plaza with landscaping, seating, and sculptural fountain
72	Freeman Plaza	Hudson Street, Broome Street, Varick Street, Watts Street, Holland Tunnel Entrance Ramps	NYCDOT	0.8	Plaza with landscaping and seating
73	Canal Park	Canal Street between West Street and Washington Street	NYC Parks	0.7	Neighborhood park with landscaping and seating
74	Hudson River Park	Areas of waterfront and Hudson River west of West Side Highway/Route 9A from Battery Place to West 59th Street	HRPT	550.0	Regional waterfront park with landscaping, seating, active and passive recreation areas
75	14th Street Park	Eleventh and Twelfth Avenues, West 22nd to West 24th Streets	HRPT	0.9	Small park with landscaping, seating, and an open lawn

MAP ID	OPEN SPACE	LOCATION	OWNERSHIP	SIZE (ACRES)	DESCRIPTION
76	Chelsea Waterside Park	Tenth and Eleventh Avenues, West 14th and West 15th Streets	HRPT	2.5	Neighborhood park with playground, ballfields and basketball courts, a dog run, walking paths, seating areas, and landscaping
77	The High Line	Elevated linear alignment from Gansevoort Street to West 34th Street, roughly paralleling Washington Street, Tenth Avenue, West 30th Street, Twelfth Avenue/ Route 9A, and West 34th Street	NYC Parks and Friends of the High Line	6.7	Elevated former freight rail line with walking paths, landscaping, public art installations, and seating areas
78	500 West 30th Street plaza	500 West 30th Street	Private (POPS)	0.2	Plaza with landscaping and seating areas
79	Hudson Yards Eastern Railyard plaza	Hudson Boulevard between Eleventh Avenue and 33rd Street	Private (Hudson Yards)	4.5	Privately owned, publicly accessible plaza with landscaping, seating areas, and the Vessel climbing sculpture
80	450 West 33rd Street plaza	450 West 33rd Street	Private (POPS)	0.4	Elevated plaza with landscaping and seating areas
81	Manhattan West plaza	Ninth and Dyer Avenues, 31st and 33rd Streets	Private (POPS)	1.4	Privately owned, publicly accessible plaza with landscaping and seating areas
82	DeWitt Clinton Park	Between West Side Highway/Route 9A and Eleventh Avenue from West 52nd Street to West 54th Street	NYC Parks	5.8	Neighborhood park with landscaping, seating, court space, synthetic turf field, and playground space

Notes: HRPT Hudson River Park Trust.
DOE New York City Department of Education.
NYCDOT New York City Department of Transportation.
NYC Parks/DOE Jointly operated playground.
POPS Privately owned public space (as designated under the New York City Zoning Resolution).
BPCA Battery Park City Authority.
PANYNJ Port Authority of New York and New Jersey.

Figure 7-1a. Parks and Recreational Resources: Local Study Area for CBD Tolling Program Infrastructure

Manhattan CBD
(as defined by the MTA Reform and Traffic Mobility Act)

Local Study Area for Tolling Infrastructure and Tolling System Equipment

Park or Recreational Resource in Vicinity of Local Study Area
(see Table 7-1 for reference)

Detail Inset Map (see Figures 7-1b to 7-1g)

Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

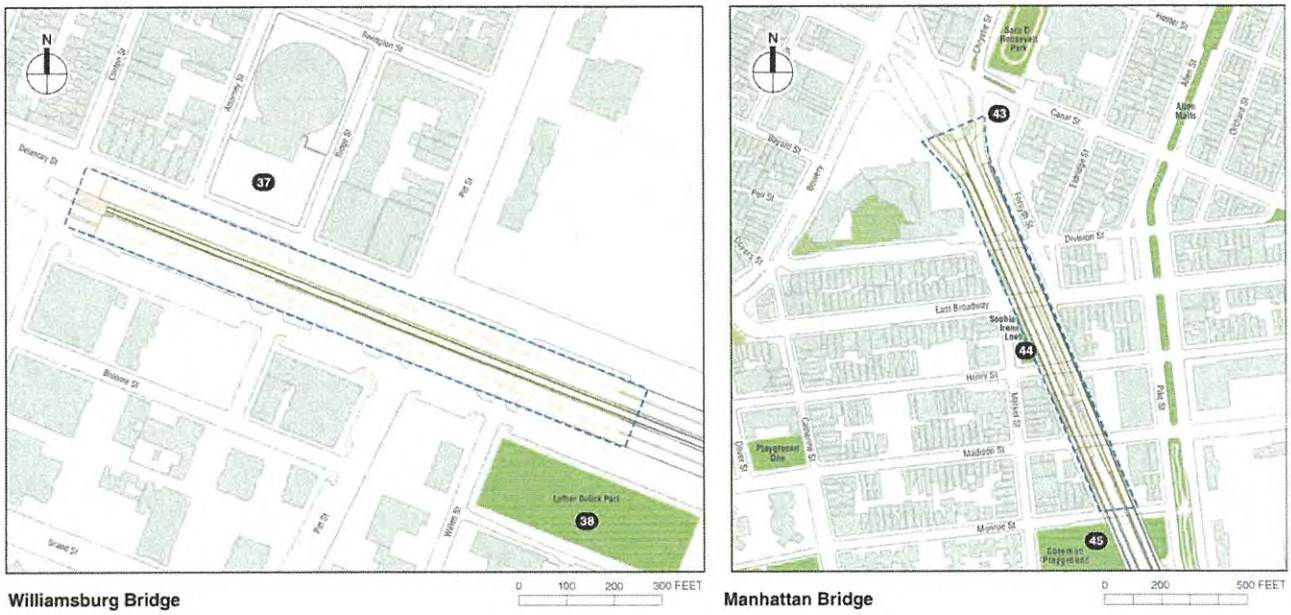
Figure 7-1b. Parks and Recreational Resources: Ed Koch Queensboro Bridge and Queens-Midtown Tunnel

Local Study Area for Tolling Infrastructure and Tolling System Equipment

11 *Park or Recreational Resource in Vicinity of Local Study Area (see Table 7-1 for reference)*

Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

Figure 7-1c. Parks and Recreational Resources: Williamsburg Bridge and Manhattan Bridge

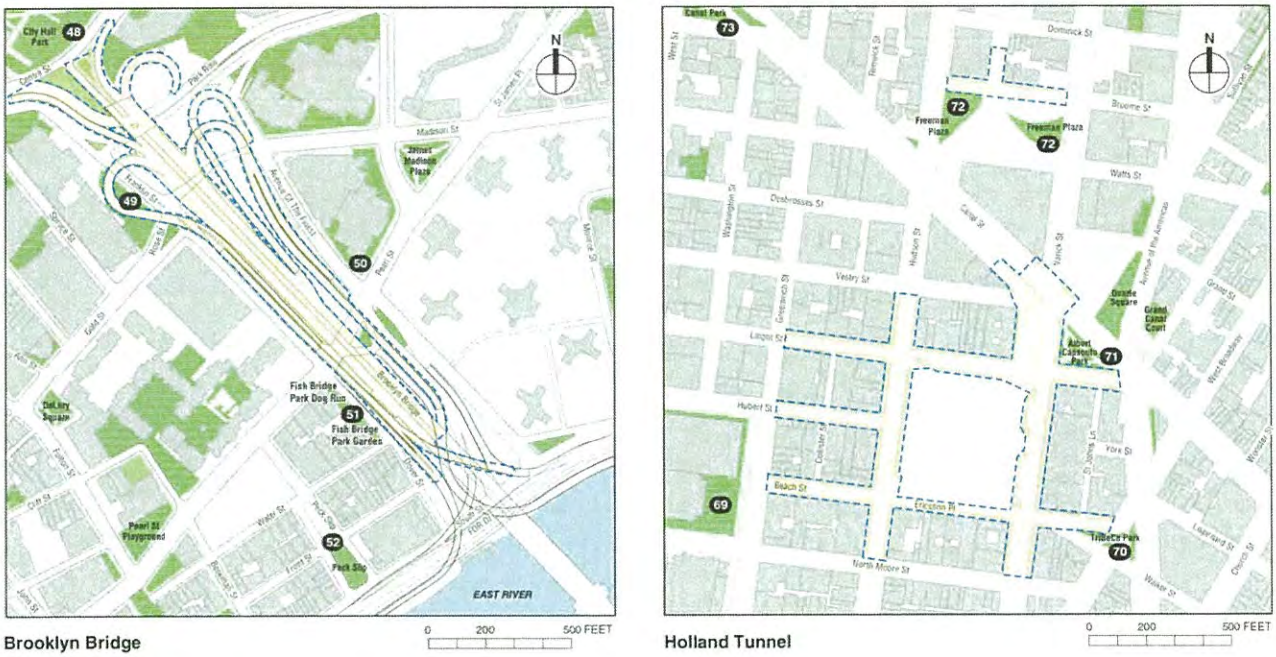


Local Study Area for Tolling Infrastructure and Tolling System Equipment

37 *Park or Recreational Resource in Vicinity of Local Study Area (see Table 7-1 for reference)*

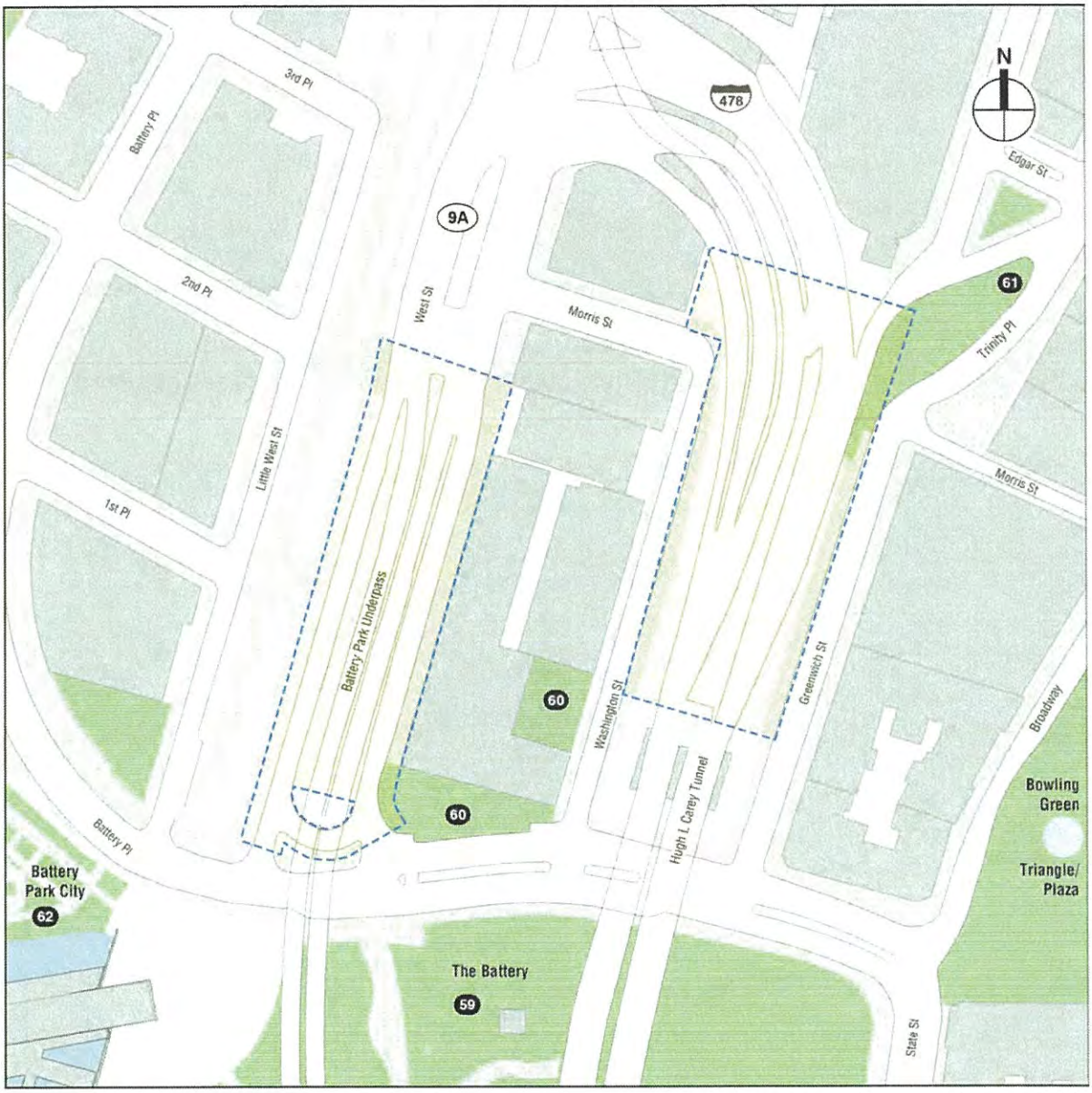
Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

Figure 7-1d. Parks and Recreational Resources: Brooklyn Bridge and Holland Tunnel



Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

Figure 7-1e. Parks and Recreational Resources: Battery Park Underpass and Hugh L. Carey Tunnel



Local Study Area for Tolling Infrastructure and Tolling System Equipment

59 Park or Recreational Resource in Vicinity of Local Study Area (see Table 7-1 for reference)

Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

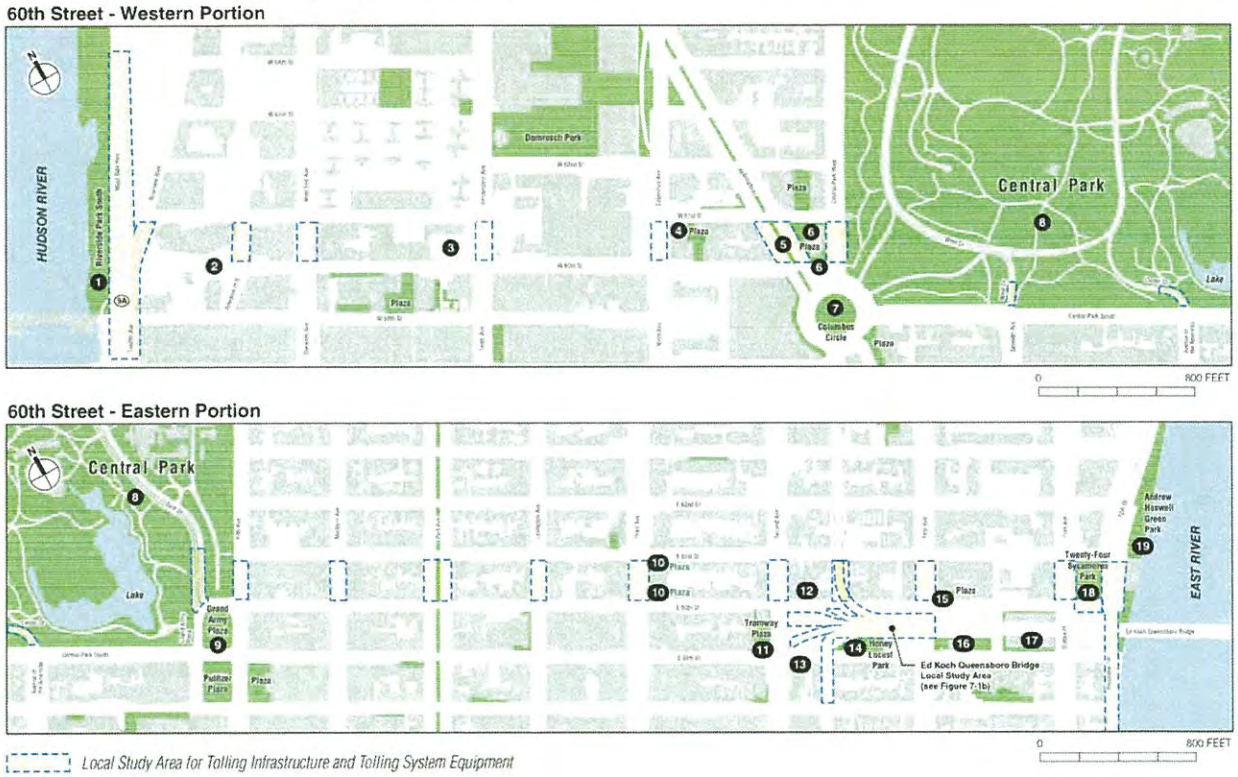
Figure 7-1f. Parks and Recreational Resources: Lincoln Tunnel

Local Study Area for Tolling Infrastructure and Tolling System Equipment

74 Park or Recreational Resource in Vicinity of Local Study Area
(see Table 7-1 for reference)

Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

Figure 7-1g. Parks and Recreational Resources: 60th Street



Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

The park has a Park Drive that forms a loop through the park and has connecting roads that lead to access points to and from the streets bordering the park (see **Figure 7-2** for the Central Park Conservancy's map of the park).[4] In 2018, NYC Parks closed Park Drive to vehicular traffic at all times except for park deliveries or other drivers with permitted business in the park (e.g., emergency response vehicles, park maintenance, park administration, vendors, and contractors). Park Drive and connecting roadways are heavily used by pedestrians (walking and jogging) and bicyclists as well as horse-drawn sightseeing carriages. Authorized vehicles (e.g., deliveries, maintenance, operations, concessionaires, horse carriages) can enter and exit the park through its vehicular entrances, including those on Central Park South (59th Street). Within the park, separate lanes of Park Drive are designated for each activity. The Central Park Conservancy's *Central Park Access Map* indicates the following:

> Originally designed for carriage rides through the 19th-century Park, the Drive today is a recreation loop shared by cyclists, joggers, and pedestrians. The inner lane is designated for pedestrians and joggers traveling in either direction. The center lane is for cyclists and pedi-cabs, and the outer lane for authorized vehicles and horse carriages; all wheeled traffic is one-way, counterclockwise on the loop.[5]

The park also has a separate network of walking paths, including sidewalks alongside Park Drive.

Central Park is listed in the National Register of Historic Places and is a National Historic Landmark. It is also designated by the City of New York as a New York City Scenic Landmark. **Chapter 8, "Historic and Cultural Resources,"** provides more information on the historic designation for Central Park.

7.2.3 High Line

The Project Sponsors would locate tolling infrastructure and tolling system equipment adjacent to and on the underside of the structure of the High Line. A former freight rail viaduct, the High Line has been converted to a linear park, which is located on top of the structure. The High Line is a 1.45-mile-long greenway and rail trail created on a former New York Central Railroad spur along the west side of Manhattan. The High Line begins at Gansevoort Street and ends near 34th Street. It parallels Washington Street from Gansevoort Street to 14th Street, Tenth Avenue from 14th Street to 30th Street, 30th Street from Tenth Avenue to the West Side Highway/Route 9A, and the West Side Highway/Route 9A from 30th Street to 34th Street. The park opened in three phases between 2009 and 2014. The park's attractions include naturalized plantings inspired by plants that grew on the disused tracks and views of the city and the Hudson River. It includes a continuous walkway, benches, and viewing areas. The High Line also offers cultural attractions and art installations. The City of New York owns the High Line, but it is programmed, maintained, and operated by Friends of the High Line, in partnership with NYC Parks, through a license agreement between the City of New York and the Friends of the High Line.

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4 Central Park also has four sunken east-west "transverse" roads that provide grade-separated vehicular access across the park at 65th/66th Streets, 79th/81st Streets, 85th/86th Streets, and 96th/97th Streets. These do not intersect with Park Drive and do not serve a recreational purpose.

5 Central Park Conservancy. 2018. *Central Park Access Map*. https://assets.centralparknyc.org/pdfs/maps/Central_Park_Access_Map.pdf.

Figure 7-2. Central Park Map

Source: Central Park Conservancy.

[Note: For an audio description, please go to the following link: https://www.youtube.com/watch?v=zousRXBlGvg&list=PLZHkn788ZQJPEY5zv-dr2gzkzMQFMgb_2&index=8.]

7.3 ENVIRONMENTAL CONSEQUENCES

7.3.1 No Action Alternative

The No Action Alternative would not result in a vehicular tolling program and would not involve installation of tolling infrastructure and tolling system equipment. The No Action Alternative would not result in physical changes to or changes in the use of or demand for any parks and recreational resources. Therefore, the No Action Alternative would not result in any effects on publicly accessible open space from the CBD Tolling Program.

7.3.2 CBD Tolling Alternative

This section describes the potential effects of implementation of the CBD Tolling Alternative on publicly accessible open spaces. **Section 7.3.2.1** describes the potential effects of the CBD Tolling Alternative on publicly accessible open spaces and other NYC Parks assets in general. **Section 7.3.2.2** describes the potential effects of the CBD Tolling Alternative on Central Park, and **Section 7.3.2.3** describes the effects of the CBD Tolling Alternative on the High Line. **Sections 7.3.2.4 through 7.3.2.6** describe the Project's compliance with Federal programs and regulations for the protection of publicly accessible recreational space. **Chapter 15, "Construction Effects,"** provides a discussion of the construction-period effects on parks and recreational resources, including Central Park.

7.3.2.1 Overview of Potential Effects on Parks in the Manhattan CBD

Tolling Infrastructure and Equipment

The CBD Tolling Alternative would place new tolling system equipment, including signage, on existing infrastructure or place new tolling system equipment on new infrastructure comparable in form to existing streetlight poles, sign poles, or overhead structures on city streets and sidewalks. **Chapter 2, "Project Alternatives,"** provides more information on the proposed tolling infrastructure and tolling system equipment and **Figure 3-3a through Figure 3-3j** in **Chapter 3, "Environmental Analysis Framework,"** show the proposed locations of the tolling infrastructure and tolling system equipment.

As noted above and discussed in **Section 7.3.2.2 and Section 7.3.2.3**, the CBD Tolling Alternative would place tolling infrastructure and tolling system equipment within Central Park and on the structure of the High Line. In other locations, proposed tolling infrastructure and tolling system equipment would be adjacent to or directly across the street from publicly accessible open space in the parks study area. These types of infrastructure are already adjacent to, and sometimes within, publicly accessible open spaces throughout New York City. Tolling infrastructure and tolling system equipment on city streets and sidewalks would not limit access to any publicly accessible open space, would not reduce the size or programming of any publicly accessible open space, and would not result in any conditions—such as increased noise, air

pollutant emissions, odors, or substantial new or increases in existing shadows—that would adversely affect the usefulness of any publicly accessible open space.[6]

In the parks study area, trees on city sidewalks and New York City public parks and recreation areas are regulated by NYC Parks. TBTA will mitigate any potential adverse effects to trees from the CBD Tolling Alternative in consultation with NYC Parks and will undertake tree protection measures consistent with the requirements of NYC Parks. A tree work permit will be required should construction, including utility, sidewalk, or pruning work, take place within 50 feet of a tree regulated by NYC Parks.[7] If trees are removed as a result of the CBD Tolling Alternative or damaged during construction, tree replacement or restitution will be provided. TBTA will follow NYC Parks' specifications for all replacement trees.

7.3.2.2 Potential Effects on Central Park

The CBD Tolling Alternative would place tolling infrastructure and tolling system equipment within Central Park. Side-fire[8] tolling system equipment is proposed at three detection locations, four poles in total, just inside Central Park near 59th Street (see **Chapter 2, "Project Alternatives"**). The equipment would prevent authorized private vehicles that are using the park roads from entering the Manhattan CBD without paying the CBD toll. Equipment mounted on mast arms is also proposed at two locations along the east and west borders of the park to detect vehicles on Central Park West and Fifth Avenue. The tolling infrastructure and tolling system equipment proposed within the jurisdictional boundaries of Central Park and adjacent sidewalks under NYC Parks control is described below:

- **On the roadways in the park that connect Park Drive to Seventh Avenue, Sixth Avenue, and Grand Army Plaza/Fifth Avenue:** On the park roads connecting to Seventh Avenue and Sixth Avenue (West Drive and Center Drive, respectively), the CBD Tolling Alternative would replace one existing streetlight pole—inside the park close to Central Park South/59th Street—on each road with a new streetlight pole with a side-fire-mounted detector and a small equipment box. **Figures 7-3a through 7-3d** show the locations of these poles, and **Figure 7-4a through 7-4c** compare views of these locations between the No Action and CBD Tolling Alternative. On the park road connecting to Grand Army Plaza (East Drive), the CBD Tolling Alternative would replace two existing streetlight poles—inside the park close to Central Park South/59th Street—with new poles with side-fire-mounted detectors and a small equipment box. These replacement streetlight poles would be in the same location and would have the same appearance as existing streetlight poles. The tolling system equipment mounted on them would use matching color schemes to blend with the appearance of the poles.

In addition, the CBD Tolling Alternative would place new signs on the replacement streetlight poles in Central Park to warn authorized drivers using the park roadway system that exiting to Central Park

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6 Refer to **Chapter 10, "Air Quality," Chapter 12, "Noise,"** and **Chapter 14, "Asbestos-Containing Materials, Lead-Based Paint, Hazardous Wastes, and Contaminated Materials,"** for more information. An analysis of the potential effects of shadows from tolling infrastructure and tolling system equipment on publicly accessible open space was not warranted because the CBD Tolling Alternative would not result in new structures that would be taller than 50 feet, and therefore would not result in notable incremental shadows on any publicly accessible open space.

7 NYC Parks: https://www.nycgovparks.org/trees/street-tree-planting/best-practices.

8 In certain locations, tolling system equipment would be mounted on a standard M2-A pole without a mast arm, referred to as a "side fire."

South/59th Street via West Drive (at Seventh Avenue) or East Drive (at Grand Army Plaza) would incur a toll. Signs would be attached to the replacement pole on West Drive and to one of the poles on East Drive. The new signs would be on the replacement streetlight poles adjacent to the road, similar to other existing signs in the park, and would not affect any recreational area. The photographs in **Figures 7-3a through 7-3d** show existing views where signs are proposed on West Drive and East Drive, as well as the locations where tolling infrastructure and tolling system equipment are proposed.

- **On Fifth Avenue:** On the sidewalk on the west side of Fifth Avenue (i.e., the sidewalk along Central Park), an existing streetlight pole would be replaced with a new pole at the same location. The new pole would contain a side-fire unit and a small equipment box. On the east side of Fifth Avenue, a new pole with a mast arm extending over Fifth Avenue would be installed. The streetlight pole would be similar in form to a standard NYCDOT streetlight pole. **Figure 7-5** shows a rendering of the proposed poles.
- **On Central Park West:** On the east sidewalk of Central Park West (i.e., the sidewalk along Central Park), a new pole with a 50-foot mast arm extending over the Central Park West roadway would be installed. The mast arm would have tolling system equipment mounted on it. **Figure 7-6** illustrates this proposed new tolling infrastructure and tolling system equipment.

Equipment that is similar in appearance is already mounted on other poles in Central Park, and the tolling infrastructure and tolling system equipment would be visually consistent with the existing streetlight poles found throughout Central Park, including matching the existing color scheme. Because the tolling system equipment would be mounted on replacement poles in the same locations as existing poles, the amount of park space would not be reduced. Therefore, there would be no adverse effect on recreational uses of Central Park from the proposed tolling infrastructure and tolling system equipment.

The Project Sponsors met with NYC Parks on multiple occasions to review project plans. NYC Parks was invited to review a preliminary draft of this EA. NYC Parks has also participated as a Consulting Party for the Project's review under Section 106 of the National Historic Preservation Act (see **Chapter 8, "Historic and Cultural Resources"**). The Project Sponsors will also coordinate with NYC Parks and the Central Park Conservancy in the final design of the tolling infrastructure and tolling system equipment in Central Park.

The CBD Tolling Alternative would result in changes in traffic patterns within and around the Manhattan CBD. As described in **Subchapter 4B, "Transportation: Highways and Local Intersections,"** based on the results of the traffic modeling conducted for the Project, the CBD Tolling Alternative under all tolling scenarios analyzed in this Environmental Assessment would reduce the traffic volumes adjacent to Central Park on Fifth Avenue and Central Park West as well as the traffic volumes crossing the park using the park's sunken transverse roads.[9] Therefore, changes in traffic resulting from the CBD Tolling Alternative would not adversely affect the character of Central Park.

[9] See **Chapter 2, "Project Alternatives,"** for more information on the tolling scenarios evaluated in this EA.

Figure 7-3a. Key to Central Park Photographs (Figures 7-3*[b]* through 7-6)

Source: Department of Information Technology & Telecommunications. NYC Open Data, NYC Planimetrics. https://data.cityofnewyork.us/Transportation/NYC-Planimetrics/wt4d-p43d.

Figure 7-3b. Photographs: Central Park East Drive near Grand Army Plaza

East Drive near Grand Army Plaza: 1
View south; light poles on west side of park roadway

East Drive near Grand Army Plaza: 2
View south; light poles on east and west sides of park roadway

Figure 7-3c. Photographs: Central Park Center Drive near Sixth Avenue

Center Drive near Sixth Avenue: 3
View southeast; light poles on northeast side of park roadway

Center Drive near Sixth Avenue: 4
View northwest; light poles on northeast side of park roadway

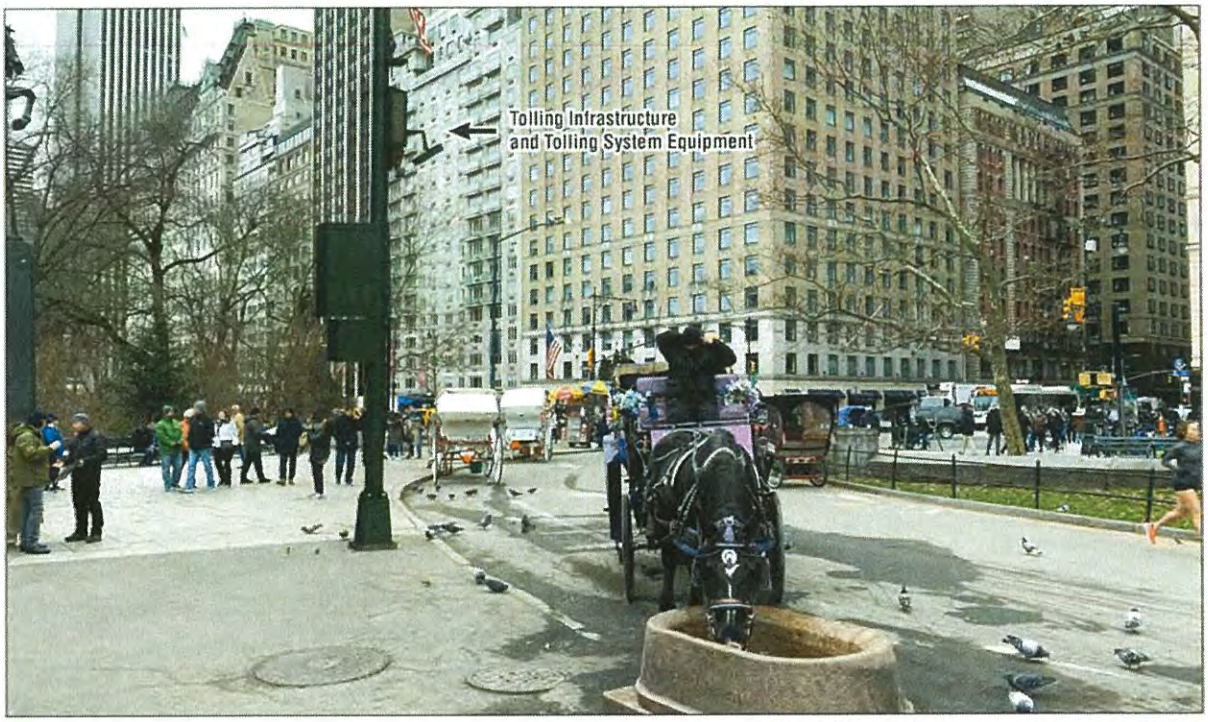
Figure 7-3d. Photographs: Central Park West Drive near Seventh Avenue

West Drive near Seventh Avenue: 5
View northwest; light poles on east side of park roadway

West Drive near Seventh Avenue: 6
View south; light poles on east side of park roadway

Figure 7-4*[a]*. Comparison of No Action Alternative versus CBD Tolling Alternative, Central Park Center Drive near Sixth Avenue

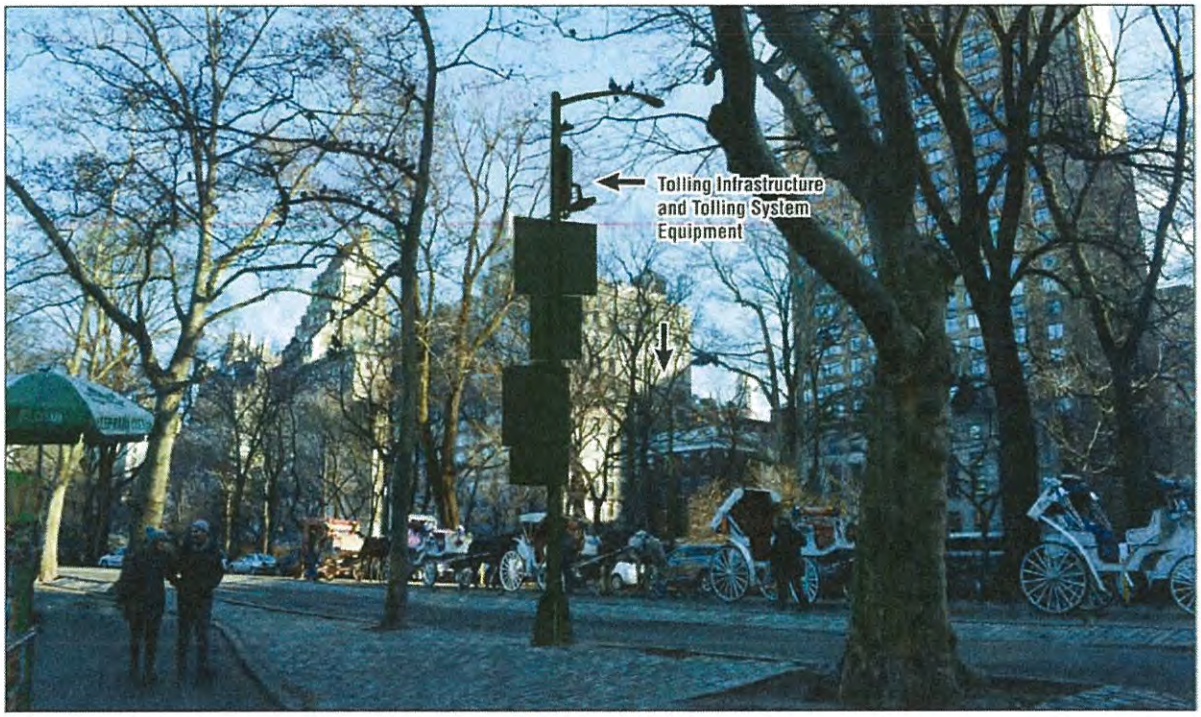
No Action Alternative, view southeast



CBD Tolling Alternative, view southeast

Figure 7-4*[b]*. Comparison of No Action Alternative versus CBD Tolling Alternative, Central Park East Drive near Grand Army Plaza

No Action Alternative, view northeast



CBD Tolling Alternative, view northeast

Figure 7-4*[c]*. Comparison of No Action Alternative versus CBD Tolling Alternative, Central Park West Drive near Seventh Avenue

o c o er e e sou

CBD Tolling Alternative, view south

Figure 7-5. Comparison Views of No Action Alternative versus CBD Tolling Alternative, Fifth Avenue at East 60th Street

No Action Alternative, view south

CBD Tolling Alternative, view south

Figure 7-6. Comparison Views of No Action Alternative versus CBD Tolling Alternative, Central Park West at West 60th Street

No Action Alternative, view north

CBD Tolling Alternative, view north

7.3.2.3 Potential Effects on the High Line

Proposed tolling infrastructure and tolling system equipment would be placed on a replacement pole adjacent to the High Line at the intersection of Tenth Avenue and West 30th Street. Tolling system equipment would also be attached to a metal pipe that would be bolted to the existing girders on the underside of the High Line (**Figure 7-7**). The CBD Tolling Alternative would add tolling infrastructure and tolling system equipment of minimal visibility to the High Line structure that is consistent with the type of infrastructure already mounted on the structure including signage, traffic lights, and pedestrian crossing signals. No tolling infrastructure or tolling system equipment would be located atop the High Line within the publicly accessible parkland, and therefore, there would be no adverse effect on recreational uses of the High Line from the proposed tolling infrastructure and tolling system equipment.

7.3.2.4 Effects on Parks Protected by Section 4(f) of the U.S. Department of Transportation Act

Section 4(f) of the USDOT Act of 1966 (49 USC Section 303 and 23 USC Section 138) applies to the use of publicly owned parks and recreation areas.

FHWA has evaluated the potential use of parkland for this Project in accordance with Section 4(f). Implementation of the CBD Tolling Alternative would require the placement of tolling infrastructure and tolling system equipment within the jurisdictional boundaries of Central Park and adjacent sidewalks under NYC Parks control as well as on the underside of the High Line structure. FHWA, in consultation with NYC Parks, intends on finding that the CBD Tolling Alternative would result in a *de minimis* impact on the High Line and Central Park. (Refer to **Chapter 19, "Section 4(f) Evaluation".**)

7.3.2.5 Effects on Parks that Have Received Section 6(f) Funding

Five parks within the parks study area have received LWCFA funding and are therefore Section 6(f) resources: The Battery, Coleman Playground, East River Park, Broadway Malls, and Central Park.[10] The New York State Office of Parks, Recreation and Historic Preservation and National Park Service must review any proposed conversions and temporary non-conforming uses of Section 6(f) resources in New York State.

The proposed tolling infrastructure and tolling system equipment near the parks that received LWCFA funding would be as follows:

- **The Battery:** No Project infrastructure or equipment is proposed within or adjacent to the park.
- **Coleman Playground:** No Project infrastructure or equipment is proposed within or adjacent to the park.
- **East River Park:** As part of the CBD Tolling Alternative, new tolling system equipment would be mounted on an existing pedestrian bridge above the FDR Drive at 25th Street, adjacent to this park. The presence of this new equipment would not affect any land within the park boundaries.

[10] National Park Service. June 2019.

Figure 7-7. Comparison Views of No Action Alternative *[Versus]* CBD Tolling Alternative: High Line at Tenth Avenue and West 30th Street

No Action Alternative, view north on Tenth Avenue

CBD Tolling Alternative, view north on Tenth Avenue

- **Broadway Malls:** Based on preliminary design, the CBD Tolling Alternative would include new or replacement poles with mast arms on Broadway between West 60th and West 61st Streets. Based on preliminary design, these poles would be on the sidewalks on the east and west sides of Broadway and not within the median, where the Section 6(f) resource (recreational land) is located.
- **Central Park:** As discussed in **Section 7.3.2.2**, the CBD Tolling Alternative would place tolling infrastructure and tolling system equipment at five locations just inside or adjacent to Central Park near Central Park South (59th Street). In all five locations, there would be no conversion of outdoor recreational space. To provide utility and communications connections to the new poles in Central Park, trenches would be dug from each pole to the nearest utility detection, and conduits would be laid in the trenches. Once the new connections are installed, the trenches would be covered and returned to their original condition. The amount of time required to construct these Project elements would be approximately two weeks at each location, and if additional time is needed, such as for regrowth of vegetation if any unpaved areas are affected for utility work, the total time from disturbance through restoration back to existing conditions would nonetheless be less than the six months set forth in the LWCFA guidance.

The New York State Office of Parks, Recreation, and Historic Preservation found that the CBD Tolling Alternative would not adversely affect LWCF protected lands within Central Park because (1) the pole-mounted equipment would not remove any part of the LWCF recreation area from outdoor recreation use or impede recreational activities; (2) the construction activities for the trenching and laying of conduits are permissible under LWCF so long as the work is completed within six months and the lands impacted are returned to original surface condition; and (3) the Project would collect tolls from vehicles exiting the park and entering the tolling district that lies south of Central Park, and tolls would not be collected from vehicles entering Central Park from the tolling district and would not impede access by the public to the outdoor recreation facilities offered within the LWCF protected area (see **Appendix 7, "Parks and Recreational Resources: Documentation Related to Section 6(f) of the Land and Water Conservation Fund Act"**).

7.3.2.6 Effects on Parks that Have Received Section 1010 Funding

Central Park, which is partially within the parks study area, has received UPARRA assistance, but the CBD Tolling Alternative would not convert any park space from recreational use to another use (see discussion in **Section 7.3.2.5**); therefore, no coordination related to UPARRA Section 1010 is required.

7.4 CONCLUSION

Except for Central Park, the CBD Tolling Alternative would not place tolling infrastructure or tolling system equipment within mapped parkland. Tolling infrastructure and tolling system equipment would be within the street, sidewalk, underside, or immediately adjacent areas of the parks and would not impair the use of or access to these parks. Except for Central Park, there would be no tolling infrastructure or tolling system equipment within parkland, and no tolling infrastructure or tolling system equipment would be located atop the High Line within the publicly accessible parkland.

The CBD Tolling Alternative involves the installation of four replacement poles within the southernmost portion of Central Park near 59th Street. It also includes a pole on Central Park West with a mast arm and a pole and sign on Fifth Avenue adjacent to the park. Equipment that is similar in appearance is already mounted on other poles in Central Park, and the tolling infrastructure and tolling system equipment would be visually consistent with the existing streetlight poles found throughout Central Park, including matching the existing color scheme. Because the tolling system equipment would be mounted on replacement poles in the same locations as existing poles, the amount of park space would not be reduced. Therefore, there would be no adverse effect on recreational uses of Central Park from the proposed tolling infrastructure and tolling system equipment. The Project Sponsors will coordinate with NYC Parks and the Central Park Conservancy in the final design of the tolling infrastructure and tolling system equipment in and adjacent to Central Park.

In the parks study area, trees on city sidewalks and New York City public parks and recreation areas are regulated by NYC Parks. TBTA will mitigate any adverse effects to trees from the implementation of the CBD Tolling Alternative in consultation with NYC Parks and will undertake tree protection measures consistent with the requirements of NYC Parks. If trees are removed for the CBD Tolling Alternative or damaged during construction, tree replacement or restitution will be provided. TBTA will follow NYC Parks' specifications for all replacement trees.

As summarized in **Table 7-2**, the CBD Tolling Alternative would not result in adverse effects on parks and recreational resources in the local study area.

Table 7-2. Summary of Effects of the CBD Tolling Alternative on Parks and Recreational Resources *[and Implementation Approach for Mitigation and Enhancement Measures]*

SUMMARY OF EFFECTS	EFFECT FOR ALL TOLLING SCENARIOS	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	TIMELINE FOR PRE- AND POST-PROJECT IMPLEMENTATION DATA COLLECTION FOR SPECIFIC MEASURES	THRESHOLD FOR DETERMINING WHEN NEXT STEP(S) WILL BE IMPLEMENTED	TIMING FOR SPECIFIC MEASURES	LEAD AGENCY
New tolling infrastructure, tolling system equipment, and signage in the southern portion of Central Park	The Project would replace four existing streetlight poles at three detection locations in Central Park near 59th Street and on two adjacent sidewalks outside the park's wall. These poles would be in the same locations as existing poles and would not reduce the amount of park space or affect the features and activities of the park. The Project would also place tolling infrastructure beneath the structure of the High Line, outside the park area atop the High Line structure. FHWA through the public involvement process is soliciting public input related to the Project's effects on these parks (see Chapter 19, "Section 4(f) Evaluation."	No	▪ Make tolling infrastructure and tolling system equipment in and near Central Park visually consistent with streetlight poles that they replace, including the color scheme. ▪ Coordinate with NYC Parks and Central Park Conservancy in the final design of the tolling infrastructure and tolling system equipment in Central Park. ▪ Avoid adverse effects to street trees; if needed, undertake tree protection measures consistent with the requirements of NYC Parks.	N/A – No early monitoring required; implemented under any adopted tolling structure.	N/A – No threshold required; implemented under any adopted tolling structure.	Will occur during design, development, testing and/or construction as per contract.	TBTA will ensure contractors comply with contract requirements

8. Historic and Cultural Resources

8.1 INTRODUCTION

As a project requiring FHWA approval, the CBD Tolling Program is an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations, 36 CFR Part 800. This chapter documents the steps taken to comply with Section 106 review and consultation and summarizes the assessment of effects on historic properties, as identified through the Section 106 process and contained in the Section 106 Finding Documentation prepared for the Project (see **Appendix 8, "Historic and Cultural Resources: Section 106 Finding Documentation"**).

In addition, because the Project is subject to review by FHWA, it must also comply with Section 4(f) of the U.S. Department of Transportation Act of 1966. Section 4(f) stipulates that FHWA may not approve the use of Section 4(f) properties unless they have determined that certain conditions apply. **Chapter 19, "Section 4(f) Evaluation,"** of this Environmental Assessment provides an evaluation of the Project's consistency with the requirements of Section 4(f) regarding historic sites.

8.2 SECTION 106 PROCESS

The Section 106 process includes the following steps:

- Initiation with State Historic Preservation Office (SHPO), Federally recognized Native American tribes, and other Consulting Parties
- Definition of the Area of Potential Effect (APE) for the build alternatives
- Identification of historic properties in the APE
- Evaluation of effects on historic properties in the APE
- Consideration of measures to avoid, minimize, or mitigate adverse effects if present
- Documentation of assessment of effects on historic properties
- Consultation to avoid, minimize, or mitigate adverse effects, if present, with agreed upon measures typically stipulated in a memorandum of agreement

8.3 IDENTIFICATION OF HISTORIC PROPERTIES

Identification of historic properties was conducted in accordance with the requirements of 36 CFR Part 800 for implementing Section 106 of the NHPA and in consultation with the SHPO. As noted above, historic properties include any district, site, building, structure, or object listed in or eligible for listing in the National Register of Historic Places (NRHP) (36 CFR Section 800.16(l1)). Although Section 106 applies to NRHP-listed or eligible properties, properties designated New York City landmarks have been included. All but two of the identified New York City landmarks also have NRHP designations.

As part of Section 106 consultation, a Cultural Resources Screening Report prepared in October 2021 was provided to the SHPO and to the four Federally recognized Native American tribes participating in the Section 106 process. The screening identified known historic properties and assessed archaeological sensitivity and prior disturbance within a study area that included areas immediately surrounding the proposed detection points and signage locations. Based on the scope of work and the results of the screening, the report recommends that no survey for architectural resources was warranted and concludes that extensive prior disturbance has reduced the archaeological potential such that the presence of intact archaeological deposits is highly unlikely within the very limited areas of ground disturbance proposed by the Project. Thus, no archaeological survey was recommended. In correspondence dated November 22, 2021, the SHPO identified two additional historic properties and concurred with the recommendations that no further architectural and archaeological surveys are warranted (see correspondence in **Appendix 8, "Historic and Cultural Resources: Section 106 Finding Documentation"**).

The APE for an undertaking as defined by 36 CFR Section 800.16(d) represents:

> [T]he geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties [i.e., NRHP-eligible resources] if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.[1]

The October 2021 screening described a proposed APE. In accordance with 36 CFR Section 800.4(a)(1), an APE was defined for the Project based on proposed work activities associated with the CBD Tolling Alternative and the potential to affect historic properties, including potential direct and indirect effects caused by the construction and operation of the Project. The APE for the Project was based on a proposed scope of work that includes the following items:

- Installation of new poles with tolling infrastructure and tolling system equipment on city streets and other at-grade roadways, including poles in new locations and replacement poles in the same locations
- Mounting of new poles and tolling infrastructure and tolling system equipment directly on bridge and tunnel structures

In correspondence dated November 22, 2021, the SHPO concurred with the APE.

The APE for the Project consists of noncontiguous areas representing the areas of potential direct and indirect effects associated with the installation of new tolling infrastructure and tolling system equipment and is mapped in **Figure 8-1** and described and mapped in greater detail in **Appendix 8, "Historic and Cultural Resources: Section 106 Finding Documentation."**

Information on resources listed in or determined eligible for listing in the NRHP was collected from the New York State Office of Parks, Recreation and Historic Preservation's Cultural Resource Information System (CRIS). The NPS's list of NHLs was reviewed, and properties that New York City Landmarks Preservation

[1] National Historic Preservation Act of 1966, as amended 2004 (54 United States Code Section 300108, 2015).

Commission (LPC) has designated (or considered eligible for such designation) as individual New York City Landmarks and Scenic Landmarks (NYCLs) or New York City Historic Districts (NYCHDs) were identified. A review of the CRIS identified 45 historic properties within the APE. The properties consist of architectural resources, including buildings, structures, and districts.

8.4 ASSESSMENT OF EFFECTS

8.4.1 No Action Alternative

The No Action Alternative would not result in a vehicular tolling program; therefore, it would not involve the installation of tolling infrastructure and tolling system equipment. The No Action Alternative would not result in any physical changes in the APE and therefore would not result in any direct or indirect effects to historic properties.

8.4.2 CBD Tolling Alternative

The Project's effects on historic properties were assessed as part of the Section 106 Finding Documentation (see **Appendix 8, "Historic and Cultural Resources: Section 106 Finding Documentation"**). Table **8-1** provides a description of the historic architectural properties in the APE and a summary of the Project's changes on or near the properties.

Within the APE, the CBD Tolling Alternative would result in new tolling infrastructure and tolling system equipment (i.e., cameras and E-ZPass readers) on the structural elements at two historic bridges—the Ed Koch Queensboro Bridge and the Manhattan Bridge—and at the Manhattan portals of the Lincoln Tunnel. In addition, the CBD Tolling Alternative would place new tolling infrastructure and tolling system equipment on the underside of the High Line, a former freight railroad viaduct. New poles with tolling system equipment mounted directly on them or from mast arms extending over the streetbeds would be installed on city streets and sidewalks and other at-grade roadways, including new poles in new locations and replacement poles in the same locations (see **Chapter 2, "Project Alternatives,"** for a description of tolling infrastructure and tolling system equipment). These include poles within Central Park and historic districts and poles on the same blocks as individual historic properties. (Refer to **Appendix 8, "Historic and Cultural Resources: Section 106 Finding Documentation,"** for the specific locations of the tolling infrastructure and tolling system equipment.)

As summarized above and described in the Section 106 Finding Documentation, the CBD Tolling Alternative would result in minor changes to the affected historic bridges, tunnel, and High Line structure. It would not alter the historic characteristics of historic districts and would result in minimal changes to the settings of individual historic properties in the APE. The CBD Tolling Alternative would not result in changes that would alter the characteristics that qualify historic properties for listing in the NRHP, nor would it diminish the integrity of any historic property's location, design, setting, materials, workmanship, feeling or association, including the three NHLs in the APE: the Holland Tunnel, the McGraw-Hill Publishing Company Building, and Central Park.

Figure 8-1. Overview of Area of Potential Effects

Source: ArcGIS Online, https://www.arcgis.com/index.html.

Table 8-1. Historic Properties and Summary of Changes

ADDRESS/NAME	DESCRIPTION	STATUS NRHP CRITERIA[1,2]	CHANGES	EFFECT
Ed Koch Queensboro Bridge	Constructed in 1901-1908, the Ed Koch Queensboro Bridge is a two-span, through cantilever truss bridge spanning the East River from Manhattan to Queens.	▪ NRHP-Listed, C ▪ NYCL	▪ Minor changes – installation of tolling equipment on bridge structure	No adverse effect
Manhattan Bridge[3]	This steel suspension bridge spanning the East River from the Lower East Side of Manhattan to Brooklyn opened in 1909; it is supported by two steel towers and includes a stone colonnade at the Manhattan approach.	▪ NRHP-Listed, C ▪ NYCL	▪ Minor changes – installation of steel girder with tolling equipment	No adverse effect
South Street Seaport Historic District and Extension	The South Street Seaport Historic District and Extension contains the largest concentration of early 19th century commercial buildings in New York City.	▪ NRHP-Listed, A C ▪ NYCHD	▪ Minor changes – installation of a pole with equipment cabinet in a parking lot ▪ Minor change to setting	No adverse effect
Holland Tunnel	Opened in 1927, the Holland Tunnel is the first subaqueous tunnel in the world; its two tubes carry traffic to and from Manhattan and New Jersey below the Hudson River.	▪ NRHP-Listed, C ▪ NHL	▪ No physical changes to tunnel structure ▪ Minor change to setting	No effect
Tribeca North Historic District (NRHP)	This district is defined by many large warehouse buildings constructed mostly between 1880 and 1910.	▪ NRHP-Eligible, A C ▪ NYCHD	▪ Minor changes – installation of one new pole with mast arm with tolling equipment in location of existing sidewalk light pole ▪ Minor change to setting	No adverse effect
Tribeca North Historic District (NYCHD)				
Tribeca West Historic District	This district is defined by commercial buildings constructed between 1860 and the 1920s; row houses from the early 19th century; as well as office, garages, institutional, and civic buildings constructed from after the Civil War to 1931.	▪ NRHP-Eligible, A C ▪ NYCHD	▪ No physical changes ▪ No changes to immediate setting	No effect
American Thread Building	This 11-story, Renaissance Revival-style commercial building faced in brown brick was constructed from 1894 to 1896 and designed by architect, William B. Tubby.	▪ NRHP-Listed, A C	▪ No physical changes ▪ No changes to immediate setting	No effect
Whitehall Building	This 20-story, Beaux Arts-style building was designed by architect Henry Hardenbergh and completed in 1904. The 31-story addition was designed by the architectural firm Clinton and Russell and built in 1908. The building has a stone base with brick cladding above.	▪ NRHP-Eligible, C ▪ NYCL	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on adjacent sidewalk	No effect

ADDRESS/NAME	DESCRIPTION	STATUS NRHP CRITERIA[1,2]	CHANGES	EFFECT
Downtown Athletic Club Building	Constructed in 1930 as a skyscraper clubhouse, the Downtown Athletic Club was designed by Starrett Van Vleck. The Art Deco-style building features irregular massing and mottled orange brick cladding.	▪ NYCL	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect
21 West Street	This 32-story, Art Deco-style skyscraper was designed by Starrett Van Vleck and constructed from 1929 to 1931; the building is faced with tan and dark-brown brick.	▪ NRHP-Listed, A C ▪ NYCL	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect
U.S. Post Office – Morgan General Mail Facility	Constructed in 1933, the Morgan General Mail Facility is a 6- to 10-story building built in the Art Deco style. The building's exterior is faced in limestone block on the lower levels with brick above.	▪ NRHP-Eligible, A C ▪ NYCL-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on adjacent sidewalks	No effect
406-426 West 31st Street[3]	Constructed in 1914, the 16-story building is symmetrically fenestrated and faced in brick.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on adjacent sidewalk	No effect
U.S. General Post Office	The 6- and 10-story, Art Deco-style building was built in 1933 under the design of architect James A. Wetmore. The building is faced in granite ashlar.	▪ NRHP-Listed, A C ▪ NYCL	▪ No physical changes ▪ No changes to immediate setting	No effect
Pennsylvania Railroad North River Tunnel (used by Amtrak and NJ TRANSIT)	Built between 1904 and 1908, the North River Tunnel carries train traffic in two tubes beneath the Hudson River between Penn Station New York and New Jersey.	▪ NRHP-Eligible, A C	▪ No physical changes ▪ No changes to immediate setting	No effect
St. Michael's Roman Catholic Church Complex[2]	Completed in 1907, the complex includes a Romanesque-style church, school, convent, and rectory. The complex was designed by Napoleon LeBrun Sons.	▪ NRHP-Eligible ▪ NYCL-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on adjacent sidewalk	No effect
Master Printers Building[2]	Completed in 1927, the 19-story building was designed by architects Parker Shaffer and clad in tan brick.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect
Webster Apartments[2]	The C-shaped building was constructed in 1923. The Neo-Classical style building rises 13 stories and is clad in red brick.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on adjacent sidewalk	No effect

ADDRESS/NAME	DESCRIPTION	STATUS NRHP CRITERIA[1,2]	CHANGES	EFFECT
Harding Building/ Garment Center Historic District[4]	Designed by architect Chester J. Storm and constructed from 1926 to 1927, the 17-story building contributes to the Garment Center Historic District, which includes industrial, residential, religious, and government buildings dating from 1858 to 1958.	▪ NRHP-Listed, A C	▪ No physical changes ▪ No changes to immediate setting	No effect
Paddy's Market Historic District	Ninth Avenue between West 38th and West 42nd Streets was the location of one of the best-known pushcart markets, located beneath the former rail viaduct. The buildings in this potential historic district are primarily late 19th century tenements with many retaining intact storefronts that reflect the history of the market.	▪ NRHP-Eligible, A C	▪ Minor changes – installation of two new poles with mast arms with tolling equipment on sidewalk ▪ Minor change to setting	No adverse effect
Former Pinehill Crystal Water Company[2]	The 6-story building, constructed in 1911, is faced in tan brick with stone detailing.	▪ NRHP-Eligible	▪ No physical changes ▪ No changes to immediate setting	No effect
Hill Building[2]	Constructed in 1914, the 14-story building is designed in the Neo-Classical style. The building is clad in terra-cotta and brick.	▪ NRHP-Eligible	▪ No physical changes ▪ No changes to immediate setting	No effect
500 West 37th Street[2]	The 6-story building was constructed in 1890. Symmetrically fenestrated, the building is faced in red brick with a stone fa ade on the ground floor along Tenth Avenue.	▪ NRHP-Eligible	▪ No physical changes ▪ No changes to immediate setting	No effect
Underhill Building[2]	Designed by Hill Stout, the 13-story building was constructed in 1915. The building is clad in red brick with decorative glazed terra-cotta.	▪ NRHP-Eligible	▪ No physical changes ▪ No changes to immediate setting	No effect
408 West 39th Street[2]	The 5-story tenement building comprises details from the Neo-Grec and Romanesque Revival styles. The ground floor is faced with brownstone with an intact cornice.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on adjacent sidewalk	No effect
523-539 Ninth Avenue[2]	The nine, 4-story tenement buildings along Ninth Avenue are faced in brick. The buildings' cornices are intact with stone lintels and windowsills.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on same block	No effect

ADDRESS/NAME	DESCRIPTION	STATUS NRHP CRITERIA[1,2]	CHANGES	EFFECT
Lincoln Tunnel	Completed after the Holland Tunnel, the Lincoln Tunnel has three tubes for vehicles to travel below the Hudson River between Manhattan and New Jersey. The north tube was completed in 1945, the center tube in 1937, and the south tube in 1957.	▪ NRHP-Eligible, A C	▪ Minor changes – installation of tolling equipment at the three portal structures	No adverse effect
St. Raphael Roman Catholic Church and Rectory[2]	The church and rectory are designed in the Gothic Revival style with stone and red brick.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect
500-506 West 42nd Street[2]	The two, 6-story tenement buildings are clad in tan brick. A metal balcony runs just below the 6th-floor windows.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on adjacent sidewalk	No effect
McGraw-Hill Publishing Company Building	Designed by architect Raymond Hood, the 33-story building was constructed in 1930. The building is faced in panels that are painted a deep blue-green and includes horizontal bands of windows.	▪ NRHP-Listed, A C ▪ NHL ▪ NYCL	▪ No physical changes ▪ No changes to immediate setting	No effect
The High Line	The 1.45-mile-long elevated steel and concrete viaduct structure was built by the New York Central Railroad to replace its on-grade Tenth Avenue tracks. It runs roughly parallel to Tenth Avenue between West 34th and Gansevoort Streets.	▪ NRHP-Eligible, A	▪ Minor changes – installation of tolling equipment on underside of viaduct structure	No adverse effect
Former French Hospital[2]	The 13-story building was built 1927–1928 by the French Benevolent Society as the New York City French Hospital. The building is clad in brick with a 2-story stone base.	▪ NRHP-Eligible	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect
Lithuanian Alliance of America	The 4-story Neo-Grec style building was built circa 1876 as a single-family residence by architect and real estate developer Edward E. Ashley. The building was purchased by the Lithuanian Alliance of America in 1910.	▪ NRHP-Eligible, A	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect
Hotel Irwin	The 11-story Hotel Irwin opened in 1925 as an apartment building for unmarried women. The building was originally planned in 1914 for use as a hotel for women by Ms. Richard Irwin, but World War 1 delayed construction. The Classical Revival-style brick building was designed by Jackson, Rosencranz, and Waterbury.	▪ NRHP-Eligible, A	▪ No physical changes ▪ Minor change to setting – new pole with mast arm with tolling equipment on sidewalk on same block	No effect